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OF  
GREEK ETYMOLOGY

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# TABLE OF CONTENTS.

## BOOK III.

### IRREGULAR REPRESENTATION OF SOUNDS.

	PAGE
Retrospect, general remarks on the nature and possibility of Sporadic sound-changes and of the relation of the sounds to each other . . .	1— 60
A. Sporadic changes of the explosives . . .	60—164
1. Labialism . . . . .	60— 96
a. $\pi$ from $k$ . . . . .	64— 80
b. $\beta$ from $g$ . . . . .	80— 91
c. $\phi$ from $gh$ . . . . .	92— 93
d. Labials from dentals . . . . .	93— 96
2. Dentalism . . . . .	96—114
a. $\tau$ from $k$ . . . . .	98—102
b. $\delta$ from $g$ . . . . .	103—105
c. $\theta$ from $gh$ . . . . .	106—108
d. Dentals from labials? . . . . .	108—111
e. Apparent insertion of a dental . . . . .	111—114
3. Aspiration . . . . .	114—142
4. Loss of aspiration . . . . .	142—153
5. Softening . . . . .	153—164
B. Sporadic changes of the Nasals . . . . .	164—170
C. Sporadic changes of the Liquids . . . . .	170—183
D. Sporadic changes of the Spirants . . . . .	183—331
1. Transformations of the Digamma . . . . .	188—235
a. $f$ changed to a vowel . . . . .	190—207
1. $v = f$ . . . . .	190—198
2. $o$ or $\omega = f$ . . . . .	198—204
3. $i = f$ . . . . .	204—207
b. Prefixed vowels as a witness to a $f$ . . . . .	207—?

## TABLE OF CONTENTS.

	PAGE
c. <i>F</i> changed to other consonants . . . . .	213—235
1. $\beta$ . . . . .	213—221
2. $\mu$ . . . . .	221—228
3. $\gamma$ . . . . .	228—232
4. Further changes . . . . .	233—235
2. Transformations of the <i>J</i> . . . . .	235—331
I. Traces of a <i>J</i> in Greek . . . . .	235—240
II. Interchange between <i>J</i> and vowels . . . . .	240—247
1. <i>j</i> interchanged with $\iota$ . . . . .	240—242
2. <i>j</i> interchanged with $\epsilon$ . . . . .	242—247
3. <i>j</i> as $\nu$ . . . . .	247
III. Change of <i>J</i> into other consonants . . . . .	247—309
A. <i>j</i> as $\gamma$ . . . . .	247—250
B. Relation of <i>J</i> to $\zeta$ and $\delta$ . . . . .	251—309
1. $\zeta$ as the representative of a <i>dj</i> . . . . .	251
a. At the beginning of a word . . . . .	252—255
b. In the middle of a word . . . . .	255—256
2. $\zeta$ as the representative of a <i>gj</i> . . . . .	256—257
3. $\delta$ or $\delta\delta$ representing <i>dj</i> . . . . .	257
a. Initial $\delta = dj$ . . . . .	257—259
b. $\delta$ or $\delta\delta$ for <i>dj</i> in the middle of a word . . . . .	259—261
4. <i>j</i> or $\iota$ with a $\delta$ prefixed . . . . .	261—301
a. $\zeta = j$ . . . . .	263—273
b. $\delta\iota = j$ . . . . .	273—276
c. $\delta\epsilon = j$ . . . . .	276
d. $\delta = j$ . . . . .	276—309
a. Feminines in $-\iota$ and $-\iota\delta$ . . . . .	279—283
$\beta$ . Stems in $-\alpha\delta$ . . . . .	283—287
$\gamma$ . Patronymics in $-\delta\alpha$ . . . . .	287—289
$\delta$ . Names of young animals in $-\delta\epsilon\nu$ . . . . .	289—290
$\epsilon$ . Adverbs in $-\delta\alpha$ , $-\delta\omicron\nu$ , $-\delta\eta\nu$ , $-\delta\iota\varsigma$ . . . . .	290—294
$\zeta$ . $\delta$ for <i>j</i> in verbal forms . . . . .	294—296
$\eta$ . $\delta$ in nouns connected with verbs with pres. in $-\zeta\omega$ . . . . .	296
$\theta$ . $\delta\nu$ . . . . .	296—298
$\iota$ . $\beta\delta$ . . . . .	298—299
$\kappa$ . $\delta$ at the end of roots . . . . .	299—302
Conclusion . . . . .	302—305
5. $\delta$ with a parasitic <i>j</i> . . . . .	305—309



TABLE OF CONTENTS.

vii

	PAGE
IV. Changes of the <i>J</i> in connexion with other consonants . . . . .	309—331
1. $\lambda\lambda$ from $\lambda j$ , $\rho\rho$ from $\rho j$ , $\nu\nu$ from $\nu j$ . . . . .	310
2. $\sigma\sigma$ from $\sigma j$ and $\sigma f$ . . . . .	310—311
3. $\sigma\sigma$ ( $\tau\tau$ ) from $\tau j$ , $\theta j$ . . . . .	311—314
4. $\sigma\sigma$ ( $\tau\tau$ ) from $\kappa j$ , $\chi j$ . . . . .	314—316
5. $\zeta$ from $\delta j$ and $\gamma j$ . . . . .	316
6. $\sigma\sigma$ ( $\tau\tau$ ) apparently from $\pi j$ , $\zeta$ apparently from $\beta j$ . . . . .	316—317
7. $\sigma\sigma$ ( $\tau\tau$ ) apparently from $\delta j$ , $\gamma j$ . . . . .	318—323
8. $\chi\theta$ from $ghj$ . . . . .	323
9. $\pi\tau$ supposed to come from $pj$ , $bhj$ , $bj$ . . . . .	323—325
10. $\mu\nu$ supposed to be = $\mu j$ . . . . .	325—326
11. <i>j</i> as <i>ι</i> transposed into the preceding syllable . . . . .	326—331
E. Interchange between the two breathings . . . . .	332—342
1. Spiritus lenis for the asper . . . . .	334—338
2. The asper for the lenis . . . . .	338—342
F. Groups of consonants . . . . .	342—361
1. Loss of a consonant . . . . .	343—349
a. Loss of a sibilant . . . . .	344—347
b. Loss of another consonant . . . . .	347—349
2. Change of organ . . . . .	349—350
3. Other affections . . . . .	350—353
4. Several affections combined . . . . .	353—361
G. Dissimilation to avoid repetition of the same sound in consecutive syllables . . . . .	361—365
H. Sporadic changes of the vowels . . . . .	365—375
1. <i>ι</i> as the representative of <i>a</i> . . . . .	366—369
2. <i>υ</i> for <i>a</i> . . . . .	369—372
3. <i>ι</i> interchanged with <i>υ</i> . . . . .	373—375
I. Anaptyxis of vowels . . . . .	375—390
1. At the beginning of a word . . . . .	376—384
2. In the middle of a word . . . . .	384—390
Final considerations . . . . .	391—397
Addendum . . . . .	398—399

## APPENDIX.

Indexes.	PAGE
I. Index of Subjects . . . . .	401—409
II. Greek Index . . . . .	410—446
III. Italian Index . . . . .	447—460
IV. Sanskrit Index . . . . .	461—470
V. Iranian Index . . . . .	471—473
VI. Teutonic Index . . . . .	474—481
VII. Letto-Slavonic Index . . . . .	482—488
A. Lithuanian . . . . .	482—485
B. Slavonic . . . . .	485—488
VIII. Celtic Index. . . . .	489—494

III.

THIRD BOOK

IRREGULAR REPRESENTATION OF SOUNDS

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τὸ μὲν ζητούμενον,  
ἀλωτόν' ἐκφεύγει δὲ τὰ μελούμενον.  
SOPH. *Oed. Rex* 110.



## BOOK III.

### IRREGULAR REPRESENTATION OF SOUNDS.

IN the second book 671<sup>1</sup> words and families of words are 407 quoted, in which we thought we could establish the regular representation of the Indo-Germanic sounds, by the corresponding Greek sounds, as it is stated on p. 82 ff. and in the table on p. 128 ff. As it is not unimportant to form a clear conception of the wide extent to which the rule holds good, before we pass on to consider the exceptions, we will begin our present task with a short retrospect. In these investigations, as well as elsewhere, numerical proportions contribute to the formation of more definite ideas. Though these can be only approximate, inasmuch as the separation of individual roots and stems rests upon no principle which can be very exactly defined, it is impossible to deny to them a certain value. But further, the greater part of the roots and words quoted serve not only as an instance of a single, but in the great majority of cases to establish a double or triple representation of sounds. For instance, rt. δακ (No. 9) has been quoted only under κ, but it may serve just as well as an example for δ and for α. Thus the 671 articles contain a considerably larger number of examples of the regular representation of sounds. If we pay no regard at all to the vowels and only consider the consonants, we get the following general result.

<sup>1</sup> To the number 619, with which the numbering closes, we have to add sixty articles, which, in order not to disturb the original numbering, are denoted by letters (15 b etc.); while on the other hand the number 73 has been omitted by an oversight, and seven articles have in subsequent editions been dropped or combined with others.

408	In addition to the 134 examples quoted for $\kappa$ we may add								
	from the remaining letters					11	total	145	
	to the 54 examples quoted for $\gamma$ we may add	9	"					63	
	" 42 " " $\chi$ " " "	2	"					44	
	" 52 " " $\tau$ " " "	16	"					68	
	" 54 " " $\delta$ " " "	22	"					76	
	" 29 " " $\theta$ " " "	2	"					31	
	" 69 " " $\pi$ " " "	37	"					106	
	" 6 " " $\beta$ " " "	4	"					10	
	" 23 " " $\phi$ " " "	13	"					36	
	Of examples of the guttural $n$ ( $\gamma$ ) there are							7	
	to the 33 examples quoted for $\nu$ we may add	38	"					61	
	" 37 " " $\mu$ " " "	34	"					71	
	" 38 " " $\rho$ " " "	126	"					164	
	" 41 " " $\lambda$ " " "	86	"					127	
	" 18 " " $\sigma$ " " "	63	"					81	
	" 5 " " $\xi$ " " "	1	"					6	
	" 14 " " $f$ " " "	29 <sup>1</sup>	"					43	
	" 9 " spir. asp. = $s$ " " "	16	"					25	
	" 8 " " = $j$ " " "	2	"					5	

The grand total is therefore 1179

certainly a considerable number, especially as regard is paid here only to the agreement of the consonants in stem-syllables, while this is excluded of course in derivative or inflexional syllables, however clearly recognizable, and the case is the same with the agreement of the vowels. And as almost all the examples quoted give rise to a greater or less number of derived words which are not taken into calculation, we may estimate tolerably well how important a part of the Greek vocabulary follows the regular representation of sounds.

But the numbers here given have also another value: they give us a clear idea of the relative frequency of the several consonants. It is noteworthy that in stem-syllables the most common of the consonants which have been faithfully pre-

<sup>1</sup> The greatly diminished number of instances of  $f$ , as compared with that given in former editions, is explained by the fact that I have now included only cases in which there is definite evidence or indications of this sound within the Greek language.

served are  $\rho$ ,  $\kappa$ ,  $\lambda$ ,  $\pi$ ,  $\sigma$ ,  $\mu$ ,  $\delta$ ,  $\tau$ ,  $\nu$ ,  $\gamma$ , and that too in the order here given, while  $\beta$  can only be proved to have been original in ten examples. From this last fact, we are tempted to doubt whether the sound  $b$  existed before the time of the separation 409 of languages, and whether it did not possibly establish itself first in a later period of a severance, which only became complete by degrees. (Cp. Grassmann 'Ztschr.' xii. 122.) This is the reason why in the table on p. 82 a note of interrogation is appended to  $b$ , where it is given as an Indo-Germanic sound<sup>1</sup>. Also in examining the irregular transitions of sound, the several numerical proportions of the regular substitution will be of importance to us, that we may measure by the help of these the extent of the sporadic transitions. In etymology, which admits of so much doubt in different directions, we cannot afford to neglect the advantage supplied by definite numbers.

We do not, however, by any means intend to plunge any deeper into calculations of this kind, though they are not unimportant. This is rather the place, seeing that here we are on the point of passing from the rule to the exception, to enter generally into the question of the possibility of the exception, and, where we can, to find a principle for the deviations from the rule.

We may consider it as proved that language is on the whole ruled by fixed laws and that such laws especially and pre-eminently concern that department of language, with which we have here to do, the world of sounds, which is but little affected by the capricious action of the self-conscious spirit. But on p. 23 we recognized as the fundamental direction of this change, the downward tendency, the diminution, or, as we thought we might best describe it, the 'weathering away' of sounds. For in fact it is very natural to compare these with rocks which are gradually diminished and wasted by atmospheric influences, and yet retain so stubbornly their core; the more so that by means of this figure we oppose an incorrect theory of growing and sprouting, which is justified for another depart-

<sup>1</sup> The  $b$  as an Indo-Germanic sound has found a champion in Bickell 'Ztschr.' xiv. 425. But even he can only point to a small number of words, in which it is probable that the  $b$  existed originally



ment of the life of language. The sounds of language as such do not increase but diminish, they do not grow, but wear out, and get rubbed off, or, to express it otherwise, after the structure of a nation's language has been on all essential points established, in the course of time the nation allows more and more of the phonetic value of words to be lost. Not as though this contradicted the ineffaceable connexion, which we felt bound to assume between the sounds which are united to form  
 410 words and the conceptions denoted by them. But a conception, which at the first 'outbreak' of the word required a full sounding phonetic form, was often adequately denoted, after the conception had once been firmly established, by a weaker group of sounds, an abbreviation as it were, or shadow of the original. *Weakening* is therefore the main principle of all phonetic change which is not occasioned either by the contact of sounds one with another, or by the purposes of the structure of language (p. 52 ff.)<sup>1</sup>. And this principle comes out clearly

<sup>1</sup> Max Müller ('Lectures' ii. 176) uses for the phonetic phenomenon, which we call 'weathering away,' the expression 'phonetic decay,' and rightly regards as the cause of it a certain 'laziness of utterance or muscular relaxation.' But we can hardly follow him in believing it possible to distinguish from the phonetic changes, which thus arise, a second kind, which he denotes by the name of 'dialectic growth' or 'dialectic variation:' and still less can we assume that the source of this second phonetic change was an earlier, undefined 'pronunciation' of the sound. Indefiniteness of sound seems to me inconsistent with that forcible articulation which is especially characteristic of the oldest languages. Besides, dialectic differentiation never ceases. If the difference between the Skt. *ap* and the Lat. *aqua* were only to be explained by supposing that neither the guttural nor the labial was heard before the break-up of the primitive Indo-Germanic language, but something between the two, we should be obliged to assume likewise an undefined pronunciation for the Lat. *aqua*, inasmuch as we find *apa* replacing it again in Wallachian. Further, as a Teutonic *h* (Goth. *ahva*) corresponds to this *p = qu*, we should have to postulate a sound, fluctuating between *p*, *k*, and *h*. But where does any such sound exist?—A more hopeful task is rather that of referring all phonetic changes to one source. This very laziness of utterance, constantly increasing in the course of time, operated in different ways. And this difference we must try to explain from the nature of

in the regular representation of the Indo-Germanic sounds in 411 Greek. For at any rate the two kinds of extensive phonetic change, which we denoted on p. 89 as 'splitting of sounds' and 'loss of sound,' are, considered more closely, a wearing off, and confusion. There is no need to prove this in the case of loss of sound. No one can doubt that there has been a diminution of sound, if the Greeks replaced the primitive *vastu* (No. 206) afterwards by *δστυ*, with the loss of the digamma. But the splitting of the vowel is also a wearing off. *a* is the vowel, the production of which requires the clearest and sharpest articulation, as we can see from the fact that in very many languages it passes in the mouths of those who are less educated, and in consequence have less control over their organs of speech, sometimes into *o*, sometimes into *e*, the physical reason of the change lying in an altered position of the mouth. From this natural characteristic of the *a*, we may regard it as a rule that it never arises in Greek and Latin from any other vowel.

language. We may assume in this case three main kinds of motives: firstly, the influence of neighbouring sounds; secondly, the production of involuntary by-sounds, or parasitic sounds; and then thirdly, a more intellectual principle, the desire to distinguish words. — Ascoli, in his 'Studj Critici' ii. p. 450 (German trans. p. 362) discusses the view on which I have always laid much stress, that *weakening* is the principle of all unconscious phonetic change. He regards 'infinite restrictions' of this principle as requisite; and I am far from failing to perceive that these relations are now shown to be much more varied than twenty years ago, when I first stated this doctrine, and perhaps looked upon it as much too easy of general application. But when an investigator like Ascoli, who of all living scholars perhaps possesses the most comprehensive and delicate knowledge of the established phonetic changes, himself admits that 'adaptations' and 'lightenings' (*agevolamenti*) are main sources of these changes, I believe that his view does not differ in principle very materially from mine, and, ready as I am to learn from him on details, I see no reason to abandon the extraordinary advantage which lies in maintaining a definite direction in a field which is anyhow difficult. — Compare now Whitney's valuable and discriminating essay 'On the Principle of Economy as a Phonetic Force' (Trans. of the American Philol. Assn. 1877). The principle Whitney puts in the place of economy is *compatibility*, 'ready compatibility in the processes of rapid speaking.'



The rule maintains its validity, though this is certainly not without exceptions, even if really, as has been conjectured, the Locrian *a* of ἀμφόρατος, παράρα and some other forms collected by Allen 'Stud.' iii. 219, arose from an earlier *ε* under the influence of the *ρ*. The splitting of the old Indo-Germanic *a* into *a*, *e*, *o*, therefore, otherwise regarded, amounts to this, that in a number of instances *a* is retained, in a number more it is 'weathered away,' sometimes to *e*, sometimes to *o*. Of course, this splitting secures peculiar advantages, especially to the two Graeco-Italic languages, in which it is most regularly carried out (p. 92), and is used by the spirit of language for the most significant and various distinctions<sup>1</sup>; so that weathering away, otherwise regarded, presents itself as beautifying and enriching language. Only from the stand-point, which we here occupy, this change falls under the fundamental principle of the weakening of sound. The same is seen at the first glance to be the case with many other changes and alterations. Certainly no one could deny that the Greek *υ* arose by weakening from the Indo-Germanic *u*; and hence that the Boeotians, who retained the *u*, have an advantage over the remaining Greeks in the retention of the more

412 vigorous sound, just as the majority of the Romance nations have over the French, who are in this respect to be compared to the Greeks. For there is no doubt that the pronunciation of the German *ü*, as it exists in its genuine form and fully brought out in the north of Germany, may be regarded as established for *υ*, at any rate during the most flourishing period of the Greek language: at a later time this sound unquestionably underwent a further thinning, until at last it entirely coincided with *i*. ('Elucidations of my Greek Grammar' p. 25.) But the sound *ü* arises from *u* by the tendency which the pure *u* shows to pass into *i*, the thinnest and lightest of the vowels, by the omission of the protrusion of the lips, needful, as physiologists show<sup>2</sup>, to bring out the full *u*.

<sup>1</sup> Cp. my essay 'Comparative Philology in its relation to Classical Scholarship' [E. T.] p. 33. With regard to the attempt that has been made to regard the distinction of the hard vowels as older than the separation of the languages, I may refer to p. 93.

<sup>2</sup> Cp. Brücke 'Grundzüge der Physiologie und Systematik der

The weakening of *u* into *v* was the first instance in Greek of the appearance of that tendency, which has been constantly growing in the course of time, to give *i* a predominance over all vowels. Hence the change from *u* into *v* is the beginning of that itacism, which we find developed into such excessive monotony in modern Greek. (Cp. Heyse 'System der Sprachw.' p. 268.)

Among the specifically Greek transitions of sound already mentioned the change of an initial *s* into the spiritus asper was spoken of above. This transition is distinguished from those just discussed by the fact that it is not by any means universal. For, on the one hand, in ordinary Greek it is only found at the beginning of a word, and then always before vowels, and, on the other hand, it is not universally carried out even here. Sometimes the old *σ* is retained, either by the side of the spiritus asper: *σὺς* by the side of *ῡς* (No. 579), or without any such by-form: *σᾶος* (No. 570), *σίαλον* (No. 557), *σῶπιγξ* (No. 519). But the number of stems, in which this is the case, is after all a very small one, compared with the many stems, which admit this change at the beginning before vowels. Of 28 stems with *σ* before a vowel, which have been discussed in the course of these investigations, the four just mentioned, and the traces of dialectic forms of the root *έδ* (No. 280) beginning with *σ*, are the only ones, in which the comparison of the cognate languages makes it probable that the sibilant originally stood immediately before the vowel. On the other hand there are eleven of them in which the loss of a consonant is probable (e.g. *σίδηρος* No. 293, *σάλπιγξ* No. 388, *σιγή* No. 572, *cu* No. 578), one in which we can show that *σ* comes from *τ* (*σύ*=*τν*), and two in which we can prove that there has 413 been softening from a harder group of sounds (*σύν* from *ξύν*, *σώχω* from *ψώχω*). We must therefore regard it as the exception for *σ* to be retained before vowels, while the rule common to all Greek dialects is for it to pass into the aspirate. In the same way we were obliged to regard the change from the two other spirants *v* and *j* to the aspirate, as falling under regular

Sprachlaute' 2nd edit. (Wien 1876) p. 24: though here it is the converse change from *i* to *ü* which is described.



change of sound. Hence as this change of sound thus forms part of a still wider analogy, inasmuch as we may ascribe to the Greek language a disinclination to spirants as a characteristic peculiarity, so on the other hand we gain support for the change of *s* into an aspirate in the fact that this sibilant is regularly dropped between two vowels. For instance, it has long been recognized that we must assume the intermediate form  $\acute{\epsilon}\text{-}\acute{\omicron}\nu\tau$ , or, more clearly written, *eh-ont* as the step between the postulated participial stem  $\acute{\epsilon}\sigma\text{-}\acute{\omicron}\nu\tau$ =Indo-G. *as-ant*, Skt. *s-ant*, Lat. *s-ent*, and the Homeric  $\acute{\epsilon}\text{-}\acute{\omicron}\nu\tau$ . In the later Laconian dialect, such an internal aspiration appeared in the place of the  $\sigma$  retained by the other Greeks. El.  $\pi\acute{o}\eta\alpha\sigma\sigma\alpha\iota$ = $\pi\acute{o}\iota\eta\sigma\alpha\sigma\theta\alpha\iota$ , Lac.  $M\acute{\omega}\acute{\alpha}$  for  $M\acute{\omega}\sigma\alpha$ ,  $\nu\acute{\iota}\kappa\acute{\alpha}\acute{\alpha}\rho$ = $\nu\acute{\iota}\kappa\acute{\alpha}\sigma\alpha\varsigma$ . Consequently the tendency of a sigma to change *before vowels* into the spiritus asper is one of the phonetic laws of Greek. This tendency recurs in the Persian family of speech, and in the Britannic branch of the Keltic languages<sup>1</sup>; some traces of it can be proved to exist in the Carinthian dialect of New High German (Kuhn 'Ztschr.' xii. 398); according to Max Müller ('Lectures' ii. 164) it is also found in some Polynesian languages; according to Ascoli 'Fonol.' 23 it occurs in the Italian dialect of Bergamo and in the French of Lothringen; and thus it is proved to be a tendency founded upon the nature of the human organs of speech, which evidently amounts to a weakening. For it needs no further argument to show that the rough breathing is a weaker sound, that it requires less force of articulation than the sigma. Our physiologists hardly regard *h* as a consonant, Sievers ('Grundzüge der Lautphysiologie' p. 78) calls the *h* of the Greeks 'a toneless breathed insertion.' Thus the law of 'weathering away' is preserved here too, and modern linguistic science, in maintaining the unqualified priority of the sibilant, as against earlier unscientific theories of 'the thickening of the aspirate' or of 'a variation between *s* and *h*,' has not merely the majority of languages, but reason too on its side. The simple

<sup>1</sup> In Irish *s* is preserved when initial before vowels; but in the middle of words between vowels it passes into an aspirate as regularly as in Greek.

fact that Latin, as compared with Greek, retains this *s*, would 414 be sufficient to refute false views as to its derivation from Greek.

So far we have found all the changes of sound which we have examined, agreeing with the general tendency, which has been pointed out. On the other hand this does not seem to be the case with certain other changes, which have been also already mentioned. The aspirates especially have to be taken into consideration here. We saw that  $\chi$  regularly corresponds to an Indo-Germanic *gh*,  $\phi$  to a *bh*,  $\theta$  to a *dh*. To understand this change of sound, we have first to determine the actual sound of the Greek aspirates.

The characters  $\chi$ ,  $\theta$ ,  $\phi$  denote for the later Greeks not aspirates, but spirants; and if Priscian i. p. 12 (Hertz) is right in stating the *only* difference ('hoc solum interest') between the Greek  $\phi$  and the Latin *f* to be that the former was pronounced with closed lips ('fixis labris'), even in his time  $\phi$  was a spirant, though not indeed like *f* and the modern Greek  $\phi$  a labio-dental, but rather an interlabial spirant. On the other hand the Greeks of the oldest time denoted the sounds, afterwards expressed by  $X$  and  $\Phi$ , by  $KH$  and  $\Pi H$ , a fact for which it is sufficient to refer to the Melian and Theraean inscriptions quoted by Kirchhoff ('Studien z. Geschichte des gr. Alphabets' 3rd edit. p. 54). For  $\Theta$  indeed we find no  $TH$ , but we have now evidence of a  $\Theta H$  in an inscription from Thera (Weil 'Mittheil. des d. arch. Instituts in Athen' ii. p. 73). On a very old inscription from Gortyn the aspirates  $\chi$  and  $\phi$  are represented by  $\kappa$  and  $\pi$  (Kirchhoff *op. cit.* p. 63). In this oldest time the Greek aspirates were certainly explosive sounds with an immediately following aspiration. The occurrence also on old Attic inscriptions of  $X\Sigma$  for the later  $\Xi$ ,  $\Phi\Sigma$  for  $\Psi$  excludes all possibility, for the time at which this way of writing prevailed, that  $X$  and  $\Phi$  were spirants. That the Greek aspirates were still really double sounds later than this in the classical period of Greek<sup>1</sup> 415

<sup>1</sup> The very careful discussion by Wilh. Schmitz 'De aspiratarum Graecarum Latinarumque pronuntiatione,' which appeared as a 'Programm' in 1863 and is now accessible in his 'Beiträge zur Sprach. und Litteraturkunde' (Leipzig 1877) p. 110 ff., is quite on the lines



is proved by the following considerations, which it would, I think, be difficult to set aside:

(1) the moveable nature of the breathing, which

(a) is easily detached from the explosive element:  $\pi\acute{\epsilon}\text{-}\phi\upsilon\text{-}\kappa\alpha$  for  $\phi\epsilon\text{-}\phi\upsilon\text{-}\kappa\alpha$ ,  $\acute{\epsilon}\text{-}\tau\acute{\epsilon}\text{-}\theta\eta\text{-}\nu$  for  $\acute{\epsilon}\text{-}\theta\acute{\epsilon}\text{-}\theta\eta\text{-}\nu$ ,  $\tau\rho\acute{\epsilon}\phi\text{-}\omega$  from rt.  $\theta\rho\epsilon\phi$  (cp. p. 49), and thus leaves behind the hard explosive sound;

(b) but, though its position varies, does not do away with the feeling that forms like  $\theta\rho\acute{\epsilon}\psi\omega$  and  $\tau\rho\acute{\epsilon}\phi\omega$  belong to each other, and hence

(c) in the various dialects attaches itself to different explosives in the same word: Ion.  $\acute{\epsilon}\nu\theta\alpha\upsilon\tau\alpha$ ,  $\acute{\epsilon}\nu\theta\epsilon\upsilon\tau\epsilon\nu$ ,  $\kappa\iota\theta\acute{\omega}\nu$ , by the side of the ordinary Gk.  $\acute{\epsilon}\nu\tau\alpha\upsilon\theta\alpha$ ,  $\acute{\epsilon}\nu\tau\epsilon\upsilon\theta\epsilon\nu$ ,  $\chi\iota\tau\acute{\omega}\nu$ ;

(d) finally makes a tenuis, with which it is brought into immediate contact, into an aspirate:  $\acute{\alpha}\phi'\text{ }o\upsilon$  for  $\acute{\alpha}\pi'\text{ }o\upsilon$ , though in the popular language, regulated by no grammar, which is supplied us in the inscriptions, we find in this matter the most marked fluctuations between tenuis and aspirate, e.g.  $\acute{\alpha}\phi\epsilon\sigma\tau\acute{\alpha}\lambda\kappa\alpha\mu\epsilon\nu$  and  $\acute{\alpha}\pi\epsilon\sigma\tau\alpha\lambda\acute{\mu}\acute{\epsilon}\nu\eta$  on the same inscription (Keil 'Schedae epigraphicae' p. 11).

I doubt whether these phenomena are to be found in any language in the case of unmistakeable spirants. On the other hand, at any rate the first and second phenomena have their analogies in Sanskrit:  $d\acute{a}\text{-}dh\bar{a}\text{-}mi$  for  $dha\text{-}dh\bar{a}\text{-}mi$ ,  $bh\acute{o}t\text{-}s\bar{j}\bar{a}mi$  by the side of  $b\acute{o}dh\text{-}\bar{a}mi$ . If  $\chi$  had the pronunciation  $kh$ ,  $\kappa\acute{\epsilon}\text{-}\chi\upsilon\text{-}\tau\alpha\iota$  is to the rt.  $\chi\upsilon$  quite as  $\kappa\acute{\epsilon}\text{-}\kappa\tau\eta\text{-}\mu\alpha\iota$  is to the rt.  $\kappa\tau\alpha$ .

(2) The extremely common interchange of the tenues and aspirates on less carefully written inscriptions of a more private character, especially on vases, e.g.  $\chi\acute{\alpha}\lambda\chi\omicron\varsigma$ ,  $\chi\acute{\omicron}\lambda\chi\iota\varsigma$ ,  $\epsilon\chi\theta\omega\rho$   $\epsilon\upsilon\tau\alpha\chi\tau\omicron\varsigma$ , for which see O. Jahn 'Abhandl. der k. sächs. Ges. d. Wissensch. hist. phil. Cl.' Bd. iii. p. 739, K. Keil

of the same general conception. — Lepsius also shares my view. Cp. *inter alia* his essay on the Arabic sounds ('Verh. der Berl. Akad.' 1861), p. 105. Cp. Schleicher 'Comp.' 201, Leo Meyer 'Vergl. Gr.' i. 43, Brücke 'Grundzüge der Lautphysiologie' p. 127. A differing view, now shared, I believe, by few, was developed by Arendt in Kuhn and Schleicher's 'Beiträge' ii. p. 283 ff. His objections have been well met by Wilh. von der Mühl 'Ueber die Aspiration der Tenues im Zend und Griechischen' Leipz. 1875 p. 15 ff.



'Philologus' xxiii. 259, and especially W. H. Roscher in his instructive dissertation 'De aspiratione vulgari apud Graecos' ('Stud.' i. 2, 63 ff., cp. Fleckeisen's 'Jahrb.' 1870 p. 449 ff). Also forms like *δεδόκχθαι* (Carl Curtius 'Inscriptionen von Samos' p. 27), *δκχος*, *πίθος*, *σχύφος* prove that the aspirates contained an explosive element. It is probable that in such cases the following breath adapted itself to the place of articulation of the explosive, and that therefore in these forms we have traces preserved to us of a sporadic transition of the aspirates into so-called 'affricates.'

(3) The manner in which barbarians, where they are brought before us speaking Greek, imitate the aspirates. The Scythian in Aristophanes 'Thesmoph.' 1001 ff. in *αίτριαν*, *πυλάξι*, the 418 Triballian in 'Aves' 1679 in *δρνιτο* substitute the tenuis for the aspirate.

(4) The manner in which the older popular Latin reproduces the Greek aspirates (Ritschl 'Monumenta epigraphica tria' p. 28). It is well known that here the aspirate is regularly represented by the corresponding tenuis. In the case of *θ*, to be sure, this does not say much, because the Romans had no dental spirant, which came near to the modern Greek *θ*. But still they had at their command *s*, which they used e.g. for the by no means identical Greek *ξ* (*sona* = *ξώνα*), and which certainly comes nearer to the sound of the English *th* than the pure *t* does. And yet they wrote *tesaurus*, *Corintus*, *tiasus*. In the same way they were by no means without a sound for *χ*, supposing this to have been already a spirant, which, though not adequate, still came very near to it. For it has been supposed with justice that in the breathing of the Latin *h* there was more friction against the palate, than in the Greek spiritus asper. But in no Greek word does *h* take the place of the Greek *χ*: at this time it is regularly *c*: *calx* = *χάλιξ*, *Nicomacus*, *Aciles*. The difference between the later pronunciation of *φ* and that of *f* consisted, as we saw, only in the fact that the former was an aspirate produced entirely by the lips, while the latter was produced between the lower lip and the upper row of teeth. The two sounds were therefore, if not the same, yet at any rate, very similar. But in the earlier period the place of *φ* -

taken by *f* in Greek words, but far more commonly by *p*, which is much farther removed from a spirant: *Poino-s* = Φοῖνιξ, *Pilemo* = Φιλήμων, *Nicepor* (Νικηφόρος), *Sisupus*, *purpura* = πορφυρά, or by *b*: *Burrus*, *Bruges* = Πύρρος, Φρύγες. On the contrary all these phenomena, (cp. the Index grammaticus to Mommsen's 'Corpus Inscr. Lat.' vol. i. and Schmitz 'Beitr.' 125) are completely intelligible, as soon as we assume for that period sounds, the first element of which was *k*, *t*, and *p*. — Indeed even at the time of Ulphilas, the sound of the Gk. *χ* at any rate does not seem to have been by any means that of the Germ. *ch*, for in Gothic it is very often represented by *k*: *drakma*, *Malkus* (Rumpelt i. 194), and in other cases, e.g. in the name *Christus*, it is preferred to express it by a special sign of its own; and yet the Gothic *h* in the groups, *hr*, *hl*, *hn* cannot in any case have been pronounced very differently from the assumed spirant, and therefore it would have been very natural to make use of this sign, if the sound of the *χ* had been that assumed by Arendt.

(5) The fact that *χ* in Semitic words very frequently represents the Hebrew *Kaph*, e.g. in *Μάλχος*, *χιτών*, while the Hebrew *cheth*, which in any case came very near to the  
 417 guttural spirant of the later time, is in earlier times not denoted by *χ* (A. Müller in Bezzenberger's 'Beitr.' i. 283).

(6) Though we must not lay much stress upon the evidence of ancient writers as to the pronunciation of their sounds in general, because of the indefiniteness and ambiguity of their descriptions, yet it is worth while noticing that Dionysius of Halicarnassus 'De comp. verb.' c. xiv. expressly speaks in the case of aspirates of the *προσθήκη τοῦ πνεύματος*.

(7) Modern Greek dialects<sup>1</sup> have often in the place of an

<sup>1</sup> The little known fact, established by Deffner ('Monatsb. d. Berl. Ak. d. Wiss.' 1875 p. 23 ff.), is of importance for the history of the aspirates, that the Tzakonian dialect has formed from the double consonants *κκ*, *ττ*, *ππ* new and genuine aspirates, just as after the loss of the old diphthongs new ones have originated in modern Greek by epenthesis. In particular cases even, as Deffner p. 180 assumes, the Tzak. *kh*, *ph* is the successor of an old *χ*, *φ*; *khrižu* 'I wash' = *χρίω*, *ophaka* = *ῥοφαξ*. — Deffner tells me that the modern Greeks pronounce every *θ* after *σ*, *χ*, *φ*, *αν*, *εν*, like *τ*, and every *χ* in a like position like *κ*: e.g. *skizo* = *σχίζω*, *efki* = *εύχῃ*.



aspirate the corresponding tenuis (Mullach 'Vulgarsprache' p. 28, 94, Morosi 'Studi sui dialetti Greci della terra d'Otranto' p. 105, Deffner 'Stud.' iv. 237):  $\xi\kappa\omega$ ,  $\sigma\tau\omicron\kappa\acute{\alpha}\zeta\omicron\mu\alpha\iota$ ,  $\tau\epsilon\kappa\nu\acute{\iota}\tau\eta\varsigma$  in the dialect of Rhodes,  $\tau\acute{\epsilon}\lambda\omega = \theta\acute{\epsilon}\lambda\omega$  among the Asiatic Greeks,  $\lambda\epsilon\upsilon\tau\epsilon\rho\acute{\omicron}\nu\omega = \acute{\epsilon}\lambda\epsilon\upsilon\theta\epsilon\rho\acute{\omicron}\nu\omega$  in the Peloponnese,  $\tau\alpha\tau\alpha\acute{\omicron}$ ,  $\tau\epsilon\rho\mu\acute{\omicron}$  in the Greek colonies of Italy (Ascoli 'Lautl.' 133). It is most common to find  $\sigma\tau$  in the place of the old  $\sigma\theta$  ( $\acute{\epsilon}\gamma\nu\omega\rho\acute{\iota}\sigma\tau\eta\nu$ ,  $\gamma\rho\alpha\phi\acute{\omicron}\mu\alpha\sigma\tau\epsilon$ ). Hence as early as in my review of Mullach ('Ztschr.' vi. 236), I argued that this circumstance was only to be explained from a pronunciation of  $\theta$ , in which a hard explosive element was heard; and I still doubt whether in these words a spirant was exceptionally changed into a hard explosive, although this change is regarded as proved for the Modern Norse  $t$  as compared with the ONorse  $th$  (pronounced as in English).

Further we must follow Rud. v. Raumer and Rumpelt in representing the transition from the aspirate to the spirant as not sudden but gradual. Between the two lay probably that class of sounds, for which Rumpelt ('Deutsche Grammatik' i. 45) uses the suitable expression 'affricated' (*affricatae*). The affricated sounds still retained a fixed explosive element, which might afterwards again attain to exclusive acceptance; while it is only under very peculiar circumstances that a tenuis could ever have come from a spirant. Ebel also in his essay 'On the History of Sounds' ('Ztschr.' xiii. 265) thinks that we may justly find in sounds of this kind an important means of explanation for many of the phenomena connected with the aspirates, and is strongly of my opinion, that in the Greek aspirates a  $k$ ,  $t$ ,  $p$  were actually heard before a breathing.

Only one argument has really been brought against the 418 pronunciation which I have demonstrated, i. e. the difficulty of pronouncing  $\chi\theta$  and  $\phi\theta$ , supposing that here two actual aspirates were brought together. But the conclusion drawn from the difficulty of a combination of sounds,—estimated according to the usages of another language—is always most uncertain. For instance, if he were to measure by this standard, a German, not acquainted from personal familiarity with the Slavonic languages as they are spoken, would declare many a combination common enough in a Slave's mouth, e. g. Bohem.

*prst*, *krk*, utterly unpronounceable; and the same verdict would be passed upon a form like *months* by one ignorant of English. The characters and the sounds corresponding to them do not completely cover each other in any language; there is always a something left, not to be characterized and not to be described, from which many surprising groups of sounds are to be explained. In Greek itself there is no want of such problems, as, for instance, in the pronunciation of  $\sigma\sigma$  and  $\tau\tau$ , which certainly was not identical with that of a double  $\sigma$  or  $\tau$ . Perhaps we have still preserved in the old form  $\alpha\pi\theta\iota\tau\omicron\varsigma$  (C. I. No. 1) an indication that the Greeks did not then pronounce with the breathing the first of two aspirates so connected. Von der Mühl has at p. 21 ff. of his essay, cited in the note to p. 114, acutely stated the difficulties which stand in the way of the theory of the assimilation of the explosives before  $\theta$ . If  $\theta$  had the phonetic value of a  $t$  with a succeeding  $h$ , we cannot understand why the  $\phi$  of the rt.  $\gamma\rho\alpha\phi$  changed to  $\pi$  before the  $t$  of  $\gamma\rho\alpha\pi\text{-}\tau\acute{o}\text{-}s$  while it survived intact before the  $t+h$  of  $\acute{\epsilon}\text{-}\gamma\rho\acute{\alpha}\phi\text{-}\theta\eta\text{-}\nu$ ; and still less why the  $\pi$  of the rt.  $\tau\nu\pi$  actually changed, before the same  $\theta$  into the very aspirate which it was evidently found hard to pronounce before another explosive. We should expect *e-grap-thēn* like *grap-to-s*, *e-typ-thēn* like *typ-to-s*, and cannot understand how the aspiration which follows the  $t$  should have the power to produce aspiration *before* it. Mühl's notion, that the assimilation was here only one of written letters and not of spoken sounds, or that in other words *kth*, *pth* was spoken, but the  $\chi\theta$ ,  $\phi\theta$  was written on the analogy of  $\kappa\tau$ ,  $\gamma\delta$ ,  $\pi\tau$ ,  $\beta\delta$ , seems to me deserving of much consideration. In an Attic private inscription of the Roman period (C. I. G. 916, l. 4) we find in  $\kappa\alpha\tau\alpha\kappa\theta\acute{o}\nu\iota\omicron\varsigma$  a counterpart to the above-quoted very old  $\alpha\pi\theta\iota\tau\omicron\varsigma$ . The following grounds may further be alleged for this view. In the face of the disinclination shown by the Greeks to aspirates at the beginning of two consecutive syllables, it is very surprising that while the

419 simple aspirate in  $\acute{\epsilon}\text{-}\tau\alpha\text{-}\phi\eta\text{-}\nu$  requires the change of the preceding  $\theta$  to  $\tau$ , the double aspirate  $\phi\theta$  in  $\tau\epsilon\text{-}\theta\acute{\alpha}\text{-}\phi\theta\alpha\iota$  leaves the  $\theta$  intact. This phonetic requirement becomes completely intelligible, directly we assume that what was spoken was



*e-ta-phēn*, but not *te-tha-phthai* but *te-tha-pthai*. My belief is then that no argument is to be drawn from grouped aspirates either against the value above assigned for sounds of this character. It seems to me rather to be an established fact that these Greek sounds had not completed their gradual transition into spirants, at any rate in the first centuries after Christ. The beginning of this corruption seems to have been made by the Laconians, though even they did not from the beginning—as Ahrens ‘Dor.’ 70 shows—substitute  $\sigma$  for  $\theta$ . This Laconism evidently presupposes the pronunciation of  $\theta$  after the manner of the English *th*<sup>1</sup>.

Hence, if the Greek aspirates had, at any rate originally, the force of *k*, *t*, *p*, with an appended breathing, and if they originated from *gh*, *dh*, *bh*, it seems at the first sight, that there has really been, in this transition, rather a strengthening than a weakening. For the tenuis, inasmuch as a more energetic obstruction of the organs of voice concerned (Brücke ‘Grundzüge der Physiologie d. Sprachlaute’<sup>2</sup> p. 74 f.), or according to Sievers (‘Lautphysiol.’ p. 65), greater ‘intensity’<sup>2</sup> is required to bring it out than for the medial, must have a stronger sound unconditionally ascribed to it, than to the medial. We should thus be obliged to consider that the tenuis with a breathing added, must be stronger than the medial with a breathing added, and therefore with regard to this widely prevalent law of the Greek sound, there would be an exception to the general tendency of the language. We might even be tempted by this surprising circumstance to look about for another explanation of the facts. What if the Greek hard aspirates were more primitive than the soft aspirates of Sanskrit? In this case everything would appar-

<sup>1</sup> The question here discussed is treated thoroughly by Brücke, ‘Grundz. d. Lautphys.’<sup>2</sup> 127 f., with special reference to Rud. v. Raumer. Brücke is inclined to assume a force of  $\theta$  as a spirant at an early date for  $\chi\theta$ ,  $\phi\theta$ .

<sup>2</sup> This is why Sievers denotes the tenuis as *fortis*, the medial as *lenis*. I prefer, instead of this Latin expression, to employ the tolerably equivalent and very familiar *hard* and *soft*. The ‘resonance’ (*tönen*) of the *chordae vocales* is according to Sievers and other enquirers no essential criterion of the soft sounds.

ently be regular; we might regard the softening of *kh*, *th*, *ph*, into *gh*, *dh*, *bh*, which we should then have to assume for  
 420 Sanskrit, simply as weakening. Such a view would really be in itself by no means absurd, and hence I have already taken it into serious consideration in my essay on 'The Aspirates of the Indo-Germanic languages' ('Ztschr.' ii. p. 323 ff.). This is a question which cannot be answered, as has often been attempted, from the few isolated facts which have casually presented themselves, but only with reference to the sum-total of the consonants in all the languages of our stock. Now if we survey these, we arrive, as I have shown more fully there, at the following facts. In the place of the Greek aspirate there appears, as we saw, in Sanskrit a medial aspirate: in the Persian languages a medial, or a soft spirant which has originated in it (Zd. *gh*, *zh*, *dh* according to Justi's way of writing them): in the Slavo-Lithuanian, Teutonic, and Keltic languages, a simple medial: in the Italian languages either the spirant *f*, which can be shown to be of later origin, as the representative of *bh* and *dh*, and the simple breathing *h*, or, especially in the middle of Latin words, here too the medial. In illustration it is sufficient here to refer to Nos. 167, 169, 172, 307, 309, 325, 402, 411, 417. Who can fail to see that these facts may be explained better from the existence of an original soft than a hard aspirate? If the hard aspirate had been a common possession of our stock before the separation of languages, we should necessarily have expected to find this, or at any rate the *k*, *t*, *p*, which come nearest to it, surviving elsewhere than in Greek. Now there are, it is true, four words, limited to Latin alone, in which *t* may be regarded with some probability as representing a Greek *θ*: these are the words *patior*, *lateo*, *puteo*, and *rutilus* which are certainly related by kinship to *παθεῖν*, *λαθεῖν*, *πύθειν*, *ἐρυθρός*. But even with these, as I have shown *op. cit.* 335, other explanations are possible; as we saw on p. 67, the *θ* in *παθεῖν* and *πύθειν* is secondary (cp. No. 383), and hence we may fairly assume that the shorter root was in Greek expanded by *θ*, in Latin by *t*. And as to *ἐρυθρός*, the immediate correlative of which occurs in Lat. *ruber*, Umbr. *rufru* (No. 306), the *t* of *ru-tilu-s* may properly



be regarded as a part of the suffix, like that of *fu-tili-s* or *fut-tili-s* (cp. p. 205 above). However, even supposing that in some words a Latin *tenuis* really corresponded to a Greek aspirated *tenuis*, it would be simpler to regard this as an isolated deviation, to be explained from a temporary preference for the hard explosive sound (which cannot be denied for 421 a certain period of the Italian languages, and especially for the Umbrian), than to build upon it conclusions as to the condition of sounds before the separation of languages. Indeed even an agreement of the two languages of Southern Europe on this point, if really established, though in any case it is limited to a few word-stems, would at most only make it probable, that before the separation of *these* two most closely related families from each other, a hard aspirate was in existence. For the much earlier period before the splitting up of the great stock into its main branches nothing would be thus proved. On these and similar grounds, I rejected, in the essay quoted, the assumption of original hard aspirates, i.e. of hard aspirates existing before the separation of languages, as the source of the corresponding soft sounds. Recently, however, this view has still been maintained by two distinguished scholars, by Sonne in his valuable essays ('Ztschr.' x.-xiv.) and by Kuhn. The latter puts together the reasons, which influence him to depart from the prevalent opinion, in 'Ztschr.' xi. 302 ff.; and although the greater part of what may be said in reply has already been brought forward by Grassmann 'Ztschr.' xii. p. 81 ff., I will not refrain from going briefly into Kuhn's reasons, especially as Grassmann does not expressly mention them. In a question of such importance it is worth while carefully examining the *pro* and the *contra*. The first argument, which Kuhn adduces on his side, runs thus: 'By assuming a transition from *gh*, *dh*, *bh* into *kh*, *th*, *ph*, we assume a strengthening of sound, whilst we see languages as a rule developing in the opposite course.' This argument loses all its force, so soon as we are able to show that another explanation of the transition in question is probable, as will be done presently. Besides we have already been obliged to admit (p. 410) that there are exceptions to this direction of phonetic change, on which, by the



way, I have myself laid especial stress. The problem is to explain these, for they cannot be altogether denied away. — ‘Secondly, Greek shows only aspirate tenues, Gothic only *th*, hence no medial aspirates, while the consonantal system of Greek is in general nearer to that of the primitive language than that of Old Indian.’ But the latter statement is true only with qualifications, and does not hold good e.g. at all of the spirants. As the Gothic *th* etymologically originated from *t*, this comes into the question still less. Further, even Greek, by the fact that in not a few cases, to be mentioned hereafter, unaspirated medials correspond to the aspirated medials of Sanskrit, points to an ante-Greek series of aspirated  
 422 medials. Grassmann justly lays great weight upon this. — ‘Thirdly, Sanskrit shows both series’ — aspirate tenues and medials — ‘completely developed side by side.’ And ‘the aspirates *gh*, *dh*, *bh*, present in Sanskrit, do *not*, in the further developement of the language (in Prākṛit and Pāli), appear in the form of *kh*, *th*, *ph*.’ But from this nothing more follows than that the course, on which these secondary languages entered, was different from that which we see in a sister language on an entirely different soil. Elsewhere too Greek and Prākṛit phonetic tendencies diverge completely. Besides, Grassmann (p. 102) points out at least two instances from Sanskrit, in which *dh* has been step by step displaced by *th*. There is also the same phenomenon in the language of the Gypsies, to which we shall recur. Hence this course of developement has not been altogether wanting in the Indian sphere. — Fourthly, ‘we always see, where new aspirates are developed, that it is only the aspirate tenues which make their appearance.’ This is true of Greek, in cases where  $\chi$ ,  $\theta$ ,  $\phi$  come from  $\kappa$ ,  $\tau$ ,  $\pi$ , and of Gothic. In Zend the *gh* and *dh* of later origin, in the place of *g* and *d*, and similarly in Middle and New Irish, where *bh* also arises out of *b*, they are not to be taken as actual aspirates, but as spirants. But even if no instance of newly formed soft aspirates could be proved, this would not disprove the existence of very ancient sounds of the kind. Hence the possibility that these sounds might have originated otherwise than by weakening from *kh* and *th*, is established. — Fifthly, ‘several instances of *kh*, *th*, *ph* in

Sanskrit agree with Greek  $\chi$ ,  $\theta$ ,  $\phi$ , and this partly in forms, e. g. in verbal terminations, which go back to the earliest formation of language. It would surely be very venturesome to assume here simply the play of chance.' But this is by no means necessary, as Grassmann has thoroughly proved. In certain words the Skt. aspirate tenuis has evidently originated from the medial. If *nakhá-s* 'nail' (No. 447) occurs by the side of Gk.  $\delta\nu\nu\chi$ , Lat. *ungui-s*, OHG. *nag-al*, Lith. *nága-s*, we may assume here the same transition of sound, which is established e. g. for rt. *nath*, the younger by-form of *nadh*, for *atha* by the side of the older *adha*<sup>1</sup>. That which became the rule in Greek, shows itself in Sanskrit in isolated traces, a kind of agreement, which often occurs in the case of kindred languages. In certain other words we may assume an aspiration of the tenuis under like conditions, as is certainly the case with the rt. *sta*, which in Skt. regularly, in Greek 423 sporadically ( $\sigma\theta\acute{\epsilon}\nu\sigma$ ) aspirates the tenuis which is established by the majority of languages. Probably this holds good also of the ending of the 2 sing. *-tha* =  $\sigma\theta\alpha$ , where the  $\nu$  of the pronominal stem *tva*, dropped after the *t*, has certainly had its effect upon the aspiration. Finally, it might even be thought that the primitive Indo-Germanic language, by the side of the soft aspirates, possessed also original hard ones; a view which I mentioned on p. 82 as one for which Grassmann had given some reasons, but which was not yet established beyond question. If this view should be correct, a part of the Indian hard aspirates would correspond from the beginning to the Greek, but we could draw no conclusion from this as to the relation of the soft aspirates to the Greek. All attempts to derive the Indian *gh*, *dh*, *bh* from *kh*, *th*, *ph* are always opposed by the one main argument that in no single one of the kindred languages does a *k*, *t*, or *p* appear in the place of these sounds, but commonly enough a *g*, *d*, *b*. On the other hand, the number of stem-words, in which according to my view a Greek aspirate corresponds to a medial aspirate, reaches 111, while only isolated examples can be quoted for different

<sup>1</sup> Ascoli 'Studj Critici' ii. 165 = 'Ztschr.' xvii. 330 discusses these phonetic relations in another sense.

relations. The facts being such, nothing remains for us but to recognize the hardening of *gh*, *dh*, *bh* to  $\chi$ ,  $\theta$ ,  $\phi$  as a fact which we have not to explain away, but rather to elucidate in its apparent strangeness.

The explanation formerly seemed to me to have been discovered by Arendt, who in the 'Beiträge zur vgl. Sprachforschung' ii. p. 283 ff. submits the soft aspirates in connexion with the sounds akin to them to a very thorough discussion. Arendt recognizes (p. 306) in the soft aspirates soft or *sonant* explosive sounds, which are directly united with that hard *surd* which we denote by *h*. For this very reason these sounds were difficult to pronounce; the vocal aperture, when they were produced had first to narrow itself, and then to open out again, without any interruption. In course of time this was made easier in two ways, some of the languages entirely giving up the aspiration, and hence changing *gh* into *g*, *dh* into *d*, and *bh* into *b*, while the Greeks on the other hand altered the soft explosives 'into sounds for which the vocal aperture was in just the same condition as for the following *h*, i. e. into *tenués*.' Hence, according to Arendt, the change consisted in a kind of assimilation of the first element to the second, and we might fairly compare the alteration of *nábhas* into *νέφος*, i. e. *nephos* with that by which rt.  $\beta\lambda\alpha\beta$  changed its  $\beta$  into  $\pi$  in  $\beta\lambda\alpha\pi\text{-}\tau\acute{o}\text{-}\varsigma$ . Since  
 424 the appearance of Arendt's essay (1861) the sound of the soft aspirates, as it is now produced by natives of India, has been several times investigated thoroughly. I need here refer only to Brücke in the 'Sitzungsber. der phil. hist. Cl. d. Wiener Akad.' vol. xxxi. p. 219, and in the 'Grundz. d. Lautphysiologie<sup>2</sup>' p. 114 ff., and also to Sievers' 'Lautphysiologie' p. 93 ff. Both maintain that the process was not so simple as Arendt assumed, and that a medial could always unite itself without any pause to the sound of our ordinary *h*. But, however we consider the soft aspirates in question to have been pronounced, so much is clear, that they were sounds very difficult to make. And this is abundantly sufficient for our purpose, for the result is that the change into the corresponding hard aspirates was one which conduced decidedly to ease, and so our principle receives sufficient support. At the same time a new reason is supplied hereby against the view



contested above, that the reverse course took place. For the change of *kh* to *gh* would have by no means conduced to ease. Ascoli has ('Ztschr.' xvii. 242 ff.) found a remarkable parallel to this hardening of the aspirates, which at first sight seems so strange. The language of the Gypsies in the same way replaces all soft aspirates of Sanskrit by the corresponding hard aspirates: Skt. *gharma-s* 'glow,' Gyps. *kham* 'sun,' Skt. *dhūma-s* 'smoke,' Gyps. *thuv*, Skt. *bhū-s* 'earth,' Gyps. *phuv*.

This fact of the hardening of the aspirates gains a much wider basis, if we follow the same scholar in his view of the Italian aspirates and their history. In 'Ztschr.' xvii. 241 ff., 321 ff., xviii. 417 ff., in a series of essays which are now reprinted in his 'Studj Critici' ii. 108 ff., Ascoli has laid down the doctrine that the Italian representatives of the original soft aspirates, before they assumed the forms of which we have historical evidence, had passed through the stage of the hard aspirates. Ascoli's scheme is the following ('Studj Critici' ii. p. 200):—

Indo-Germ. aspirates	<i>gh</i>	<i>dh</i>	<i>bh</i>
Early Italian and Early			
Greek aspirates	<i>χ</i>	<i>θ</i>	<i>φ</i>
Early Latin spirants	<i>h</i>	<i>p</i> <i>f</i>	<i>f</i>
Latin representative	<i>h- g- g-</i>	<i>-d- f- -b-</i>	<i>f- -b-</i>

This view offers the advantage of bringing into a closer union Greek and Latin, and also Latin and the other Italian languages, and of establishing a clear connexion for surprisingly varied phonetic phenomena. It has besides strong support in the hard or surd character of the Italian *f*. What 425 previously prevented me from agreeing with this theory, which was advanced with great acuteness and complete mastery of the material, was in the first place a doubt as to the origination of a *b* from the spirant *f*, and, secondly, the necessity, according to Ascoli's explanation, of assuming for the Italian soft explosives *g, d, b*, where they have originated from *gh, dh, bh*, a completely different origin from that of the corresponding sounds of the Persian, Slavo-Lithuanian, Teutonic, and Keltic languages, hence e. g. for the Lat. *g* of *lingo*, com-

pared with the Goth. *bi-laigôn* (No. 174), for the *d* of *aedes*, compared with the OIr. *aed* (No. 302), and for the *b* of *nūbēs*, compared with the ChSl. *nebo* (No. 402). But undeniably the course of the history of language was in many ways a more complicated one than scholars were inclined to assume twenty years ago. For instance, the change of an *f* into *b* between Goth. *ufar* and OHG. *ubar* (No. 392), ON. *svefn* 'somnus' and OHG. *swebjan* 'sopire' (No. 391) cannot be denied without violence. Perhaps it is to be explained by supposing that instead of the labio-dental narrowing, which *f* requires for its production, in the middle of a word there came to be an interlabial contact, which finally could not be distinguished from the sound of a *b*. There are also not wanting instances in which the same primary sound has changed into the same sound in quite different ways in different languages. Thus the dialectic *κέβλη*, *κεβάλη* (No. 54) agrees in its *β* with the *b* of the Goth. *haubith*; but the *β* has to be regarded in Greek as a sporadic weakening of *φ*, but in Gothic as a regular representation of the Indo-Germanic *p*; and so the Goth. *hlif-tu-s* (No. 58) corresponds to the modern Greek *κλέφ-τη-s* (Old Greek *κλέπ-τη-s*). But the modern Greek *φ* (= *f*) is based upon a late change of the *π* before *τ* into the labio-dental spirant, the Gothic *f* upon the ancient rule of 'shifting.' For these reasons I feel no difficulty in now accepting unreservedly Ascoli's statement. The character *p*, I may notice for the benefit of readers who have not access to Ascoli's own explanations, denotes in his scheme the inter-dental hard spirant, expressed in English by *th*, while - before and after a letter, e. g. -*b*- denotes that it occurs in the middle of a word.

The Teutonic 'shifting of sounds,' which in earlier editions I have at this point endeavoured to trace back to principle, has now been made the subject of such various and detailed discussions and attempts at explanation, that I am not in a position to enter upon it. I can omit it the more readily, because Greek etymology is not at all touched by it. One of the most recent discussions, that of Kräuter 'Zur Lautverschiebung' (Strassburg and London 1877), agrees with me at least in  
 426 the assumption that the starting-point of the whole movement



is to be found in the transmutation of the soft aspirates. Striking analogies to this Teutonic 'shifting' have been adduced from Armenian by Hübschmann 'Ztschr.' xxiii. 18 ff. It is very noteworthy that in this language too the movement affects all three series of mutes, aspirates, medials, and tenues.

We may explain, with yet greater ease than the transformation of the aspirates, two other processes, which at first sight might seem to be also in opposition to the main direction, which we have asserted. To these belongs the change of an original *j* into *ζ*, the thorough discussion of which we have reserved for one of the subsequent chapters, because it could only be carried out in conjunction with a whole series of other phenomena of language. The transition from *j* to *ζ* will be there seen to be by no means a strengthening, but a coarser pronunciation accompanied by a transformation of the spirant. Just as little can it be regarded as a strengthening, if the spirants *j* and *v* often appear in Greek under the form of the corresponding vowels *ι* and *υ*. For in the first place, owing to the close kinship of *j* and *i*, of *v* and *u*, it is in many cases impossible to make out, whether the consonant or the vowel is the more primitive. The Vedic Sanskrit shows an extensive variation between these nearly related sounds, and makes it probable, especially in the numerous formative suffixes with a *j*, which have Greek and Latin suffixes with an *i* corresponding to them (*ιo-s*, *ια*, *ιor*, Lat. *iu-s*, *ia*, *ior*), that before the separation of the languages the vowel was predominant here. Secondly, the soft vowels *ι* and *υ* require hardly more force of articulation than the corresponding spirants, which of all sounds suffer the greatest displacements and losses, so that here too we by no means perceive any strengthening of the sounds. In fact, even if it should appear that other vowels also, most commonly *ε* and *ο*, take the place of these spirants, this will not seem to us an exception to the general direction.

After this glance back at regular phonetic change and the general direction which we may detect in it, we proceed to the task of surveying, in the first place generally, the character of the irregular or sporadic movement of sound

which is to be distinguished from it. At the time when I first sent this book out into the world, all such questions had as yet been to a very slight extent collectively discussed. In face of a method of procedure, which not unfrequently was very unsafe, it seemed to me that something was gained if, excluding  
 427 altogether what it was quite impossible to demonstrate, I simply distinguished the *rule*, established by numerous instances, from the *exception*, the *phonetic law* from the *phonetic tendency*, and marked off more definitely all that belonged to this region in the case of Greek. And this endeavour did not fail to win for me encouraging approval. Recently, in the case of some younger scholars the tendency has established itself, not indeed to deny absolutely the second kind of phonetic movement, the irregular or sporadic—this would be impossible even for the most zealous friend of rule—but yet to place a kind of ban upon it, and to look upon it as a matter of course with mistrust.

The watchword of this tendency is 'phonetic laws work blindly,' or, as Osthoff, 'Das Verbum in der Nominalcomposition' p. 326, puts it, 'with the blind necessity of nature.' We cannot omit to subject this assertion to examination. In the first enthusiasm at the firmer steps which the students of our science learnt to take, they did not always, I think, deal very cautiously with the word 'nature.' Too much was said about natural laws in language; and some even desired to include the whole of the science of language among the natural sciences. Schleicher especially went far in this direction; he as it were personified language as a living being, and thought he could lay down for it, as for the growth of plants or animals, laws universally valid. Although I never shared this view in all its ramifications, I am quite ready to admit that I have myself not always made a right use of the word 'nature.' But what sort of natural laws are those which required for the Ionic dialect the change from  $\bar{a}$  into  $\eta$ , and for the Doric the retention of the  $\bar{a}$ , or which bade the Greek hold fast to the old aspirates up to the first Christian centuries, and then give them up? I acknowledge that in respect of these views I have received much instruction and stimulus from the work of Whitney, which is full of sound and sober thinking. He urges



us throughout not to forget that the creators and employers of language are men, and that we have to guard carefully against hypostases, which sometimes pass quite into the region of myth. If we represent language, the linguistic sense, the linguistic instinct, or phonetic laws as personal activities, we must never forget that it is a figure of speech, of much the same kind as when we say: 'justice requires,' or 'a feeling of decency forbids this.' Language belongs to the soul of men, alike in its phonetic as in its more intellectual side<sup>1</sup>. The laws of language are of a similar kind to the laws and behests of custom 428 and right, only that we can never trace back the origin of the laws of language to individual lawgivers. Even the most firmly established linguistic usages rest in a very small degree upon the physical incapacity of a nation to produce at a certain period certain sounds or combinations of sound. A Greek could at all times, as is shown by ἡσαν, θράσος, very well pronounce a σ between two vowels. But the custom had established itself with him, to allow a soft σ in this position to drop. The Athenian avoided to a great extent the combination ρη, but that his organs of speech could produce this very well is shown by words like χρῆσθαι, κόρη. An old Italian *f* was represented in the middle of a word by *b*, but the Romans had no difficulty in pronouncing *rūfus*. By looking at them in this way the demonstrable laws of language lose nothing of their steadfastness. There are indeed also inviolable customs, habits of life, and legal ordinances in a nation, exceptions to which are hardly to be found, and the life of the soul is no more excerpt from laws than the physical life. But by the side of these there are customs which are observed with less regularity; and in just the same way there are in every language phonetic changes, which have not become laws, and yet are not a matter of absolute caprice. It is true that language is as a rule more uniformly and firmly ordered than custom and right, because mere fancy and the pleasure of the individual has no play in it. Hence nothing is to be rejected more decidedly than the too hasty and unwarranted admission of

<sup>1</sup> I am very glad to find myself agreeing here with much that Brugman says in the 'Morphologische Untersuchungen' by himse<sup>l</sup> and Osthoff, i. p. 12.



exceptions. Up to a certain point, then, all forces in language work blindly, for a full consciousness of the processes is doubtless extremely rarely present. Even analogy, which is allowed to compete with blind natural necessity, is based upon the operation of conceptions dimly hovering before the mind. Language requires to be measured with her own measure. For the history of language, as for all history, there is no other course than that of feeling one's way cautiously from surely established facts, and so tracing out those which are less plain, and in seeking support for the correctness of the results arrived at in the manner in which they fit into each other.

But enough of these general considerations<sup>1</sup>. The whole of the third book has to do with the demonstration of particular sporadic transitions of sound. But now that mistrust has once been aroused, I consider it not superfluous to collect here  
429 beforehand a number of especially clear cases, which come less under consideration further on, and are not wholly derived from Greek, and then to take up the question where we have to seek the explanation of this whole phenomenon.

Transitions of sound (πάθη), brought about naturally, not by caprice, are divided by the old etymologists into three classes: ἔλλειψις, πλεονασμός, τροπή. If we adopt here this division, in the first place *loss*, especially at the beginning of a word, is one of the most undeniable processes. The loss of an initial  $\sigma$  was assumed by us in the case of κείω (45 b), κείρω (53), κληῖς (59), κοῖ (64), κίδναται beside σκίδναται (294), κόπτω (686), κρίνω (76) before  $\kappa$ , in the case of τέγος (155), ταῦρος (232), ταφ (233), τύπτω (249), τύρβη (250) before  $\tau$ , in the case of πεν (354) before  $\pi$ , and that of a  $\gamma$  before  $\lambda$  in λῖς (544) 'smooth.' Is this loss the effect of a phonetic law? No one can maintain this, for  $\sigma\kappa$ ,  $\sigma\tau$ ,  $\sigma\pi$ ,  $\gamma\lambda$  are favourite initial combinations in Greek. The Attic writers use στέγος (cp. στέγη) as well as τέγος, which is in use from the time of Homer, and better suits Lat. *tego*, *tectum*, Goth. *thak*. From Homer onwards σμικρός and μικρός are found side by side. Sanskrit supplies us with tārá (205) 'star,' beside the Ved. *stṛ-bhis*, *paç-jā-mi* (111)

<sup>1</sup> [Professor Curtius has returned to this subject in his essay, 'Zur Kritik der neuesten Sprachforschung' (Leipzig 1885)].

'I see,' besides *spaç-a-s* 'spy,' and Latin *cŭ-ti-s* (113) beside *scŭ-tu-m*. Gothic has preserved in *stiur* the *s*, which is still heard in the German *Stier*, and English *steer*, while *ταῦρο-s* (232), *tauru-s*, ChSl. *turŭ*, ON. *thór-r* have lost the sibilant. In Irish *sc*, *sr*, *sn*, *sm* have been retained when initial remarkably often, but on the other hand, what is in other languages a mere tendency to drop an initial *s* before *t*, has become an established law: cp. Nos. 155, 177, 216, 219, 233. How else are we to describe this but as sporadic loss of sound? In the Skt. numeral *dvāu* (277) and in other words denoting duality *dv* is retained, but in *viçati* (No. 16) it has become a simple *v*, and the evidence of the cognate languages shows that this bifurcation is very ancient, and that therefore in very early times without any discoverable reason two numerals of the same origin were treated differently as to the initial letter. No one probably will deny that the Skt. dat. gen. *tē* belongs to the stem *tva* 'thou,' and yet the loss of *v* after *t* is quite isolated. In the case of the combination *σF*, of which we no longer find any written evidence for Greek, the language evidently adopted a 'bifurcating' course, when it was initial. Either the *σ* disappeared, as in *Φαδεῖν* (252), *Φέ* (601), *Φέθος* (305), *Φιδίω* (283), or on the contrary, the *F* assimilated itself to the preceding *σ*, which then as a sharp sibilant did not pass into an aspirate, as in *σίδηρος* (293), *σάλπιγξ* (388 b), *σάλος* (556), *σιγή* (572), *σιωπή* (572 b), *σμφός* (575). The clearest evidence of this process is furnished by the Homeric *κονίσσαλο-s* (with the variant *κονί- 430 σαλο-s*), which evidently originated in *κονι-σφαλο-s*, and with *ἴσος* (569) = *vishva* gives the best proof that the combination *σF* can through *σσ* become a simple *σ*. — The Keltic languages hold a very different position with regard to *sv* when initial. In the British branch *chw* has come from it, a development like the Zd. *q*: Cymr. *chwaer* 'sister,' plur. *chwioryd*, Zd. acc. sing. *qanharem*. In Irish either the *s* (as *s*) or the *v* (as *f*) has been retained, and indeed both sounds alternating in one and the same word: *siur* and *fiur* 'sister,' *sollus* and *follus* 'clear' (No. 663), Cymr. *chwech* 'six,' Ir. *sé* 'six,' *sesser* 'six men,' but *mor-fesser* 'great six men,' i.e. 'seven men' (No. 584). — The rule that *τ* before *ι* became *σ* with the Ionic Greeks (Dor. *φᾱ-τί*, Ion. *φῆ-σι*) is never observed in the dat. sing. of the *τ*-stems:

κέρατ-ι, παντ-ί, nor in ἔτι, ἀντί. — The apocope of vowels is certainly no phonetic law of Greek, as is shown by ἐστί, ἀπό beside Lat. *est, ab*, and yet it is found in numerous prepositions from Homer onwards, in the most different dialects. From λέγουσι we never get \*λέγους, but undoubtedly from λόγοισι the Attic and Doric λόγους. Or is this also to be denied? Perhaps too it will be denied—as some are very fond of borrowing examples from living languages—that in *heutzutage* the *e* of *heute*, and in the dative *dem Mann* the *e* of *Manne* has been lost. What is to be done with Lat. *dic, duc, fac* beside *jace, pete* [and the Plautine *dice, duce* etc.]? In the case of these, I suppose, the assumption holds good that forms in frequent use are occasionally liable to especial mutilations.

Growth (πλεονασμός) is recognized by the more recent science of language mainly in the form of a developement of vowels, and of some few consonants, out of neighbouring consonants. We shall enter upon this in the closing chapters. Since the publication of the second part of Joh. Schmidt's 'Vocalismus,' the developement of vowels from nasals, liquids, and spirants has been treated with especial interest. But in this there has been discovered nothing in the way of natural necessity. Before *f* a vowel was developed in ἐείκοσι (16), ἐέρη (Cret. ἀέρσα 497), while forms like \*ἔοινος, \*ἔείκω, which are just as conceivable, do not occur; and an *a* has sprung up before *λ* in ἀλείφω, before *μ* in ἀμέλγω, of which λείπω and μένω know nothing. In ἀφ-ε-ρος an internal vowel has been developed, but not in ἀφνειός. Conversely the Lat. *fēmina* has retained the vowel of the suffix, which in *Vertumnus, columna* has disappeared. βέλεμον, τέρεμνος, Μέθυμνα, στάμνος have lost the vowel between the two nasals, which was retained in the great majority of participles. It was only very gradually that in Latin the usage became established in the case of *poclum* or *poculum*,  
 431 *dextera* or *dextra*. There is a clear case of growth at the end in the so-called ephelkystic *ν*, the fluctuating appearance of which is at the same time an especially plain example of the fact that there were other forces at work in the life of language besides phonetic laws and the tendency to imitation.

The wide sphere of τροπή or phonetic change in its narrower sense embraces on the one hand combined sounds, and on the



other simple sounds. Examples of both classes may be adduced here. *ks* is differently treated. Sometimes it remains unchanged, e. g. *ἄξων* beside Skt. *áksha-s*, Lat. *axis* (582), sometimes by assimilation of the *s* to the *k* it becomes *kt*: *τέκτων* (235) beside *tákshan*, *ἄρκτος* (8) beside *íksha-s*. — The combination *ρσ* is treated in three ways. It remains unchanged in *θάρσος*, *ἔρση*; it is assimilated to *ρρ* in *ῥρρος*, *πυρρός*; it becomes a simple *ρ*, with compensatory lengthening in aorists like *ἔκειρα*, in *οὐρά* (505), and without it in *ῥρος* beside Hom. *οὔρεα* (504). — From the same combination *λς* comes *λλ* in *ἄλλος* and numerous other cases, *λ* with compensatory lengthening in *καλός* (later *καλός*), while the substantive *τὸ κάλλος* and the comparative *καλλίων* show the regular doubled consonant. — From *ἐγέννατο*, preserved among the Aeolians of Lesbos, came the Attic *ἐγεῖνατο*, but *γεννᾶν* and *γενναῖος* always preserved the double *νν*. In distinction from this there came in Attic from the primary form *ξενφο-s* (Inscript. of Corcyra) not \**ξέννος*, the regular Aeolic form, but with a single *ν* *ξένος*, without the compensatory lengthening which may be seen in the Ionic *ξεῖνος*. — As the whole of the investigation which follows is occupied with the demonstration of sporadic transitions, it will be sufficient here to bring into prominence phenomena belonging to this sphere, like aspiration and softening. No natural necessity produced the *χ* in the Hom. *ὀρωρέχεται*, in *λύχνος* beside *λίκνον*, *πυκνός*, any more than the *φ* in the Herodotean *πέπομφα* beside *πομπή*, the *b* in Skt. *pí-bā-mi* and the Lat. *bi-bo* (371), or the *γ* in *μίσγω* beside *misceo* (474) or in *ὀλίγος* beside rt. *lik* (553). Any one who denies sporadic changes of sound would have to separate *σὺς* from *ῡς* (both Homeric), and Skt. *eváçura-s* from *ékypó-s* (20), and he would find his position difficult with regard to the interchange between *ρ* and *λ*, e. g. *αἰρέω*, Cret. *αἰλέω*, ordinary Greek aorist *εἶλον*. The demonstration, excellently supported by Osthoff in the first volume of his 'Forschungen,' following several previous scholars, that the Indo-Germanic suffix *-tra* appears in Latin not merely as *-tro* (*ara-tru-m*) but also as *-cro*, *-clo*<sup>1</sup>, *-culo* (*lava-crum*, Osc. *sakara-klu-m*, Lat. *ora-cu-* 432

<sup>1</sup> Sayce 'Principles of Comparative Philology' p. 49 compares the usual [?] English pronunciation of *at least* as *ac least*.

(*lu-m*) would be necessarily looked upon now by its author himself 'with mistrust.' The epenthesis of an *ι* is in Greek a phenomenon in many cases as unmistakeable as it is incalculable in its appearance, which e.g. in the preposition *ἐνί* in Homer sometimes makes itself apparent, sometimes not, while it shows itself in *κεῖνός* for *κεῖνος*, without however excluding *κενεός*.

Naturally these examples might be easily multiplied, and the following pages supply abundant materials. The only other cases I will refer to are *σκέπ-το-μαι* beside *spec-io* and Skt. (*s*)*paç* (111), and Lith. *kep-ú* beside ChSl. *pek-q* (630). For myself I am content to point out what a hard task would await any one who to maintain this 'blind necessity' would do away with sporadic phonetic change. And so long as this has not been done, I see no advantage in passing a vote of 'no confidence' upon this process. It seems to me better worth while to trace out the inducements which render intelligible to us such a fluctuation as we recognize, even within the limits of one and the same idiom and the same period of language,—and must recognize if we are not to close our eyes to evident facts, without on that account falling into arbitrariness or uncontrolled license. In such an inquiry after the reasons we shall often not reach the goal, as is frequently the case in the entangled paths of the life of language, but some points, I think, may still be made probable. I may mention especially the following.

In the first place, we must keep well in view the fact that a language or a dialect is at no time a complete and entire unity, formed at a stroke, but rather an entity which is throughout historical, created by degrees, and consisting of strata piled one upon another. Even in the idiom of a section of the history of language, marked off sharply in time, there are always to be found, beside the uppermost stratum of the phonetic forms which have become dominant, older intrusions, which, from some reason which we cannot always discover, crop up in the more recent periods. Sometimes a single word may have got loose in early times from the family of kindred words, and after the sense of connexion had been lost, preserved faithfully the older sound, which was altered in the



majority. It seems to me probable that the  $\kappa$  of  $\acute{\alpha}\text{-}\tau\rho\alpha\kappa\text{-}\tau\omicron\text{-}\varsigma$  beside the  $\pi$  of  $\tau\rho\acute{\epsilon}\pi\omega$  (p. 468 No. 633) is to be so explained. This retention of the old beside the new is perhaps less extensive in languages without literature and without popular poetry, but it is especially extensive in a nation which like the Greek in the earliest time gave birth to a universally celebrated Epos, familiar to all, and which up to the establishment of Atticism created a poetry richly developed also in other directions. Half obsolete words from earlier times crop up in Attic Greek, e. g.  $\xi\pi\omicron\varsigma$ , which was retained only in the phrase  $\acute{\omega}\varsigma \xi\pi\omicron\varsigma \epsilon\iota\pi\epsilon\iota\nu$ ,  $\acute{\omega}\varsigma$  and  $\acute{\omega}\varsigma$  preserved their anaphoric force only in a few applications. But not merely do whole words take such a position, but also forms of words of a more ancient stamp are found scattered among the mass of new formations. Even the modern High German has individual words, which by their phonetic form point to a much earlier time: e. g. *Bräuti-gam*, *Nachti-gal*, where, as Jacob Grimm says, 'the old full sound of the vowels has been preserved,' or *be-quem*, now the sole relic of the OHG. *queman*, which elsewhere has become *kommen*. The few Homeric words, which in the nominal suffix  $\tau\iota$  has not changed  $\tau$  into  $\sigma$ :  $\beta\omega\tau\acute{\iota}\delta\alpha\iota\tau\iota\varsigma$ ,  $\phi\acute{\alpha}\tau\iota\varsigma$ ,  $\mu\eta\tau\iota\varsigma$ ,  $\chi\eta\tau\iota\varsigma$  (cp.  $\chi\alpha\tau\acute{\iota}\zeta\omega$ ), are doubtless to be explained in the same way. They are all words of an antique type, of which  $\phi\acute{\alpha}\tau\iota\varsigma$  as a poetic word remained unchanged even in the Attic writers.  $\mu\acute{\alpha}\nu\tau\iota\varsigma$  takes up a special position on the score of its  $\nu$ . Here perhaps the hieratic usage had a conservative effect.

There are noteworthy differences in the treatment of the group  $\sigma\mu$  in Greek. In the prehistoric time the Greeks were disinclined to this group, so that  $\sigma\mu$  was changed into  $\mu\mu$ , and frequently was preserved only as  $\mu$ , sometimes with, but also sometimes without compensatory lengthening: Skt. *asmát*, Aeol.  $\acute{\alpha}\mu\mu\epsilon\varsigma$ , Dor.  $\acute{\alpha}\mu\acute{\epsilon}\varsigma$ , Skt. *ásmi*, Aeol.  $\xi\mu\mu\iota$ , Dor.  $\eta\mu\acute{\iota}$ , Ion.  $\epsilon\acute{\iota}\mu\acute{\iota}$ ,  $\eta\mu\alpha\iota$  for  $\eta\sigma\text{-}\mu\alpha\iota$  (568), Hom.  $\pi\acute{\upsilon}\mu\alpha\tau\omicron\varsigma$  for  $\pi\nu\sigma\text{-}\mu\alpha\tau\omicron\varsigma$  (p. 716). On the other hand an  $\sigma$  which has arisen out of other dentals is a favourite sound before  $\mu$ , from Homer downwards:  $\iota\sigma\text{-}\mu\acute{\iota}\nu\text{-}\iota$  (608),  $\kappa\acute{\omicron}\sigma\text{-}\mu\omicron\text{-}\varsigma$  (25),  $\pi\epsilon\acute{\iota}\sigma\text{-}\mu\alpha$  (326), later  $\iota\sigma\text{-}\mu\epsilon\nu$ ,  $\delta\sigma\text{-}\mu\eta$ ,  $\lambda\omicron\gamma\iota\sigma\text{-}\mu\acute{\omicron}\text{-}\varsigma$ . But there is no complete consistency here, for the  $\sigma$  is retained, although original, in the Attic compared with Ion.  $\epsilon\acute{\iota}\mu\acute{\epsilon}\nu$ , Dor.  $\eta\mu\acute{\epsilon}\nu$ . Perhaps in s like

ἐστί, ἐστέ have had their influence, especially as *σμ* was a very common combination in the Attic time. But the contrast in the Homeric language too between *εἰμί, εἰμέν* on the one hand, and *ἔμμεναι, ἔμμεναι* on the other is still surprising. We see here clearly how the products of different stages of the language lie side by side. — It is an archaism, as Fick ii<sup>3</sup>. 236 also assumes, that *σ* is retained in *θρασύ-s, θράσος* beside *θάρσος*, and in *πράσον* beside Lat. *porrum*, which is explained from the fact that \**θαρσύ-s, θάρσος* (*θαρσύνω*) were the older forms. When metathesis came in, the sibilant was too firmly attached to be set aside. Still the Argive proper name  
 434 *Θράυλλος* shows that in particular dialects the ruling tendency to the aspiration of the *σ* prevailed. We may explain in a similar way the retention of the initial *σ* in *σῦριγξ*, which goes back to an earlier \**σφαριγξ* or \**σφεριγξ*. The *σ* once occurring in combination was retained after the *Fa* or *Fε* had been reduced to *υ*, precisely as in the Homeric *ἦυσε ἀντή* the integrity of the initial, not contracted vowel is based upon the earlier occurrence of the fuller rt. *aFe*. A very clear instance of the effect produced at a much later period by an older sound long extinct is found in the three Attic words in *-ρη*: *δέρη, κόρη, κόρρη* ('Stud.' i. 1, 248): in the case of each of the three an older form with a consonant after the *ρ* is established (cp. on No. 53). The retention of doubled consonants in some more isolated words like *γεννᾶν, γενναῖος, ἐννέα, ὄρρος* I regard in the same way. The whole so-called conjugation in *-μι* is fundamentally an archaism of the kind, which, in spite of the powerful attractive force of the prevalent method of formation, has been preserved among the Greeks to a proportionately wide extent. Why may we not regard that as possible in the sphere of phonetics, which is universally recognized in respect of formation and vocabulary?

Another source of violations of the phonetic rule lies in the influence of dialects one upon another. Violations of this kind are universally recognized, and will not be wholly denied even by the most zealous defenders of regularity in this sphere. Indeed, scholars were formerly very much inclined to put difficult words, to a certain degree, out of all control by denoting them as 'dialectic'; a procedure which is



objectionable in method, where we have no demonstrable indications of a definite dialect. The extraordinary abundance of synonymous forms in Homer is certainly to be explained to some extent from the intermixture of Aeolisms, though mainly from the retention of the old beside the new. For Herodotus' ἄμπωτις 'ebb' with its surprising τ we might, if only on the strength of the ω (cp. Aeol. πώνω=πίνω), conjecture that it was borrowed from some un-Ionic dialect. The π of the Attic πέμπ-το-ς, πέμπ-ας, πέμπάζω agrees much better with the Aeolic πέμπε than with the Attic πέντε: and ποινή, if it belongs to the Cypr. πείσει, agrees better with this than with the common Greek τίω (cp. p. 472). ἱστορεῖν, ἱστορία are Ionic words, with a rough breathing, surprising in face of ἴσμεν, οἶδα, etc. These words borrowed by the tragedians from the pre-Attic literature were never really popularly current in Attic prose. The un-Attic Ἀθάνα, which appears in the tragedians, and not only in melic passages, is certainly a Dorism or an Aeolism. For πρύτανις, which belongs to πρό, we might 435 conjecture Aeolic origin. In the case of ἀνώνυμος, συνώνυμος, etc., (cp. πανήγυρις beside ἀγορά) this assumption is improbable, because here the ν both in the stem-word and in composition, extends much further. Certainly the effects of these local transferences are not on the whole very common in Greek. But we must keep cases of the kind before our eyes, that we may judge from them what is linguistically possible. Many considerations of a different kind, which belong here, have been adduced by me in my essay 'On the range of phonetic laws, especially in Greek and Latin' ('Berichte der k. sächs. Ges. d. Wissensch.' July 1870). I may refer especially to the difference in the *position* of the phonetic change. I am by no means inclined in this respect to demand an abstract equality before the law, and to maintain of the majesty of phonetic laws that it is blind like justice. The phonetic changes which here come under consideration are almost all based upon convenience. What is more justified psychologically than that mortal men when speaking, paid homage to the vis inertiae in the main syllables of words, that is, in the stem-syllables with important limitations, and also frequently in the final syllables, only



not to imperil too greatly the intelligibility of the word or the sentence; while they did so to a somewhat greater extent in final syllables, and in particles not unsuitably called 'empty' words? Such considerations explain to us the following facts. The *ι* of the dat. plur. of the *α* and *ο* declensions was dropped by the Athenian, for *χώραις*, *λόγοις* are quite intelligible, but not the *ι* of the 3 plur. in *-ουσι*, *-ᾶσι*. The surprising change in Latin from *tr* into *cl* has been established very sparingly in stem-syllables, but all the more abundantly in syllables forming stems, which do not contribute much that is of importance (Osthoff 'Forsch.' i.). The Boeotians never changed the *ξ* of the nom. sing. into *ς*, but they did change that of the preposition *ἐξ*, which took the form of *ἐς*, and in the adverb *περίξ*, which appeared as *πέρις*. With the Romans we find by the side of *ex* the forms *ec* and *ē*, but where do we find beside *rex* a *\*rec* or *\*rē*? The poets frequently used *πολλάκι* besides *πολλάκις*. It appears to me by no means incredible that in this isolated case the *ς*, which at that time had no significance, disappeared. I cannot believe in a safe conduct granted by the laws of nature, which made every final sigma absolutely inviolable; and still less that, as has been conjectured, on the analogy of little words like *ἐξ*, *ἀμφίς*, which had nothing in common with *πολλάκις* except  
 436 the quite abstract category of the *indeclinabilia*, one not to be grasped by the popular instinct of language, the *ς* was added at a later time. A quite isolated loss of sound is shown by the Homeric *ᾄρ* and the Old Elean *τὰ τ' ᾄλ* (C. I. G. No. 11). These are the only Greek words which lost a final *α*, and in the case of *ᾄρα* the initial *ᾄ* may admittedly be dropped at pleasure, so that *ᾄρα*, *ᾄρ*, and *ῥά* stand side by side. From *εἰ ᾄν* came at an early time *ἐάν*, which long maintained itself, although *ἦν* and *ᾄν* were used beside it, the former even in Homer. Even Herodian collected *μονήρεις λέξεις*, words which in some respect stand alone. It will not be possible to get rid of this conception out of the science of language.

Finally, we must not lose sight of the fact that the written sound never quite coincides with the spoken. Hence if the sound expressed by the same sign, e.g. the *j* in one case becomes a vowel, e.g. *i*, in the other a consonant, e.g. *z* or Gk. *ζ*,

this may be very well explained, as has been already conjectured in other quarters, from a minute difference of the two mother-sounds at an earlier time, for which indeed all tradition is lacking in the particular case, and which it seems to me exaggeration to regard as exempt from change. But what was otherwise the use of the physiology of phonetics, with its teaching that every single sound in language denoted by a sign is properly only the representative of a whole series of sounds, which under the more delicate investigation of living languages admit of being very well distinguished, but which are closely akin? For instance, to understand the irregularities of the dental sibilant in Greek, we must not neglect the difference between the sharp and the soft *s*. We shall come back to this point when dealing with the spirants and their Greek transformations.

Reference must be made also to accent as a source of peculiarities, especially in vocalism. Indeed recently its importance has been successfully established for the consonants also in the Teutonic languages. Perhaps this is a side of the question which will be most readily recognized by the opponents of isolated transitions of sound. This possibility also must be kept before our eyes. But certainly hardly anything has as yet been surely established to clear up the questions with which we are here concerned. The student of language has to deal at every step with unknown quantities. It is a mistake, in every case to admit as a fact, nothing but what has been explained completely and with full certainty. Much is meanwhile often gained by simply putting side by side a set of facts. Often new sources of knowledge or continued special inquiries 487 furnish new explanation, where previously only uncertain conjectures as to the reasons of the phenomenon were possible.

Even for irregular or for sporadic substitution of sounds, we must take as our guiding line the fact that we are to expect only a transition of the stronger sound into the weaker, not *vice versa*. We have seen already (p. 23) how much has been gained for the control and regulation of etymology by this one principle, the recognition of which we owe entirely to comparative philology. The etymologies of the ancients ultimately went so far as to regard as possible +



change of any letter into almost any other; and the comical attempt of L. Ross, to make the 'Italicans' once more into sons of the 'Graeci' [cp. Hadley's 'Essays' pp. 141-167] amounted to the assertion of the principle that 'no sound was secure against changing into another.' All such assumptions are based upon the tacit presumption that change of sound is occasioned by accidental instances of inaccuracy and vagueness on the part of speakers. What is accidental can only be guessed at; and hence the older etymology had really a character of pure divination, and in the delight it took in its professed art of solving riddles, it was not rarely the first to set them itself. In place of these endless metamorphoses, which, viewed as a whole, leave on us the impression of magicians' or conjurors' tricks, we endeavour to establish a definite tendency. If we succeed in this, an important limit is put to arbitrary etymologising, inasmuch as certain assumptions, in the sphere of phonetics at any rate, are excluded as impossible. We readily acknowledge that this goal is not yet reached. And it cannot be denied that the thorough special investigations of the last ten years have led us to see that the courses taken by phonetic changes are more involved than we thought them. We had something to say upon this on p. 410 (note), but saw at the same time that, in spite of all, we are well justified in holding firmly to the principle, the endeavour after greater ease in sounds, as the guiding one. Only now the conception of weakening or ease will seem to us less simple than formerly. The physiology of phonetics has more and more shown us how manifold are the sounds which the alphabet denotes as unities, and to what modifications their production is subject. I have always laid stress upon the fact that we are still only at the beginning. Even in the present position of the inquiry fortunately a complete agreement has been established as to the inherent improbability of

438 many phonetic changes which have been asserted. For example, if it has recently been maintained, that in certain derivative endings the guttural tenuis  $\kappa$  has originated from the dental medial  $\delta$ , or if on the other hand this same  $\kappa$  has been derived from  $\sigma$  or  $f$ , such suppositions now hardly find a supporter.

According to these explanations, we shall have to endeavour to examine the relation of the various sounds to each other, arranging them according to the force required for their articulation, in order to be able to estimate what sporadic changes of sound are probable, what are improbable. It is understood, of course, that by changes we mean only such as take place without any influence from juxtaposition, which is evident and universally recognized: that e. g. the change from  $\gamma$  into  $\kappa$  before  $\tau$ :  $\acute{\alpha}\kappa\text{-}\tau\acute{o}\text{-s}$ , or before  $\sigma$ :  $\acute{\alpha}\xi\omega$ , i. e.  $\acute{\alpha}\kappa\text{-}\sigma\omega$ , is here left quite out of the question. For in such changes, which fall under the head of assimilation, the transition of the weaker sound into the stronger is unmistakeable. In the same way, the foreign or loan-words of each language are entirely excluded from our consideration at present. We may see most clearly from the numerous Greek loan-words in Latin, how much wider are the laws which govern the phonetic relations of such words. Loan-words are, of course, exposed to manifold transformations, for they are carried like merchandise from one nation to another. In such cases we have only to deal with attempts to accommodate the form of foreign sounds, which often cannot be exactly reproduced, to the sounds of the borrowers' own language. Hence, for example, the various ways of reproducing the Greek  $\phi$  among the Romans, which appears sometimes as *p* (*purpura*), sometimes as *b* (*Bruges*), sometimes as *f* (*forbea* =  $\phi\omicron\rho\beta\acute{\eta}$  Fest. s. v. cp. p. 300). We have further the adaptation to the native vocabulary, for which Förstemann ('Ztschr.' i. ad init.) has introduced the excellent name 'popular etymology' (*Volksetymologie*) [Cp. Max Müller 'Lectures' ii. 367-8, 529-533]. We cannot doubt that Lat. *cādūceus*, as was conjectured long ago (Vossius 'Etym.' s. v.) is really only a Latinisation of Dor.  $\kappa\alpha\rho\acute{\upsilon}\kappa\iota\omicron\nu$  (Att.  $\kappa\eta\rho\acute{\upsilon}\kappa\epsilon\iota\omicron\nu$ ), and probably, in spite of the length of the  $\bar{a}$ , we may recognize an assimilation to *cādo*, *cādūcus*. But it would be very incorrect to regard the transition from *r* to *d* as admissible generally, i. e. even in native and inherited words. In Greek the number of words, that may be shown to have been borrowed, cannot be great. But even in the case of these many phonetic transitions occur, which we could not allow for the inherited



stores of the language. Benfey ii. 88 compares the Gk. *πάνθηρ* with the Skt. *punḍārika-s*: this is perhaps the single  
 439 instance in which Gk. *θ* corresponds to a *ḍ* of the Indians, and the assimilation to the Gk. *θήρ* is unmistakeable. Bopp ('Gloss.'), Benfey ii. 65 and, following them, Christ ('Lautlehre' p. 14) compare *βάσας* with the Skt. *pāshāṇā-s* 'stone,' 'touchstone:' this word too may be regarded with Benfey as only a borrowed word, but I do not attempt to decide whether the Greeks borrowed the name for the *lapis Lydius* from the Indians, or whether both these nations received it from a third: for in Sanskrit too the word is quite isolated. Benfey compares Hebr. *bāshan* 'land of basalt'<sup>1</sup>. Hence it would be a serious error to quote this comparison in order to prove *β* equivalent to Skt. *p*.

If, after thus defining the limits of our sphere, we review the individual sounds according to their proportionate strength, the vowels offer the least difficulty. For it is universally recognized that *a*, the strongest of the vowels, requires the greatest force of articulation, and that *u* and *i* stand by its side as weaker sounds (cp. Bopp 'Vergl. Gr.' i<sup>2</sup>. 13, etc.). We must therefore absolutely reject the transition of *u* or *i* into *a*,—and indeed hardly any one could have supposed this to take place, at any rate in Greek;—but conversely we must hold the change of *a* into the weaker *u* or *i* as in itself probable; and hence in Latin and Teutonic too we find innumerable instances of a *u* or an *i* by the side of an original *a*. In the case of Latin indeed this transition does not seem to be direct, but to have come in through the intermediate stages of *o* and *e*, so that e.g. we may assume with certainty between Skt. *dāna-m* and Lat. *dōnu-m* the form *dōno-m*, and with great probability between the negative particle which in Skt., Gk., and Osc. takes the form *an*, and Lat. *in* the intermediate form *en*. For the Italian languages we may refer on this point to the thorough investigation of Corssen in the second

<sup>1</sup> A. Müller in Bezzemb. 'Beitr.' i. 287 denies the Semitic origin of the word, without mentioning the Skt. word, and proposes an etymology of *βάσας* based upon the Lithuanian *bandyti* 'test,' and a suffix (also Lithuanian) *-sena*: this is certainly very bold, and in any case is quite irreconcilable with the Skt. *pāshāṇā-s*.



edition of his work on the 'Pronunciation, etc. of Latin' vol. ii. It is true that of the Teutonic languages it is precisely the oldest form, the Gothic, which shows the most commonly *i* and *u* in the place of an *a*, e.g. in *is-t*=Skt. *ās-ti*, Gk. *ἐσ-τί*, Lat. *es-t*, and in the negative *un-*, where the vowels have remained to the present day, in German as in English. Hitherto no intermediate stages have here been demonstrated; on the contrary, the *ē* of the Old High German, which corresponds to the Greek and Latin *e*, is derived from *i*, and the corresponding *o* from *u*, by 'breaking' [i.e. by 440 the influence of a contiguous consonant]. But from my investigation of the 'splitting of the A-sound' ('Sitzungsberichte der k. s. Ges. d. Wissensch.' 1864 p. 9 ff.), the results of which have been mentioned above, pp. 52 and 92, it seems to me probable that the Old High German has rather preserved in these cases the older sound, so that this branch of the Teutonic family, though only known to us at a later date, still gives us here, as in other cases, the representation of an older condition of the language, than the Gothic<sup>1</sup>. I will not here enter into the analogous phenomena in Slavonic and Lithuanian. But even in Sanskrit it is by no means uncommon to find the softer vowels in the place of an older *a*, and that even in stems, which have elsewhere, and partially in kindred formations of Sanskrit itself, retained their *a*; especially in the st. *pi-tar* nom. *pi-tā* (No. 348) = *πα-τερ* nom. *πα-τήρ*, Lat. *pa-ter*, Goth. *fa-dar*; *hir-aṇa-m* 'gold' (No. 202) by the side of Zd. *zar-anyā*; *sthī-ti-s* = Gk. *στῆ-σι-s* for *sta-ti-s* (No. 216); *niç-ā* 'night' by the side of *nák-ta-m*, Goth. *naht-s*, Lith. *nak-ti-s* (No. 94); *purās* = Gk. *πῶρος* (No. 347); rt. *çudh* 'purify' = Gk. *καθ* in *καθ-από-s* (No. 26), while the Slaves replace the *a* of this root by *i*: ChSl. *čis-tŭ* 'clean.' Sanskrit grammar explains these weakenings in part by the influence of the accent; but we cannot account for all cases without assuming extensive shiftings of the

<sup>1</sup> Cp. Scherer 'Z. Gesch. d. d. Sprache' pp. 7, 186 etc., where it is stated that Müllenhoff had previously expressed this view in his lectures.—These relations are thoroughly discussed in the same sense by Fick 'Die ehemalige Spracheinheit der Indogermanen Europas' p. 176 ff.

accent. We see in Skt. to a yet more extensive degree a long  $\bar{a}$  degraded under similar conditions into a long  $\bar{i}$ , a phenomenon, which is very surprising, and which certainly deserved a thorough discussion. Greek is entirely free from this serious mutilation of the original form. In our tables on p. 128 [vol. i. 158]  $\iota$  and  $\upsilon$  could not be placed among the regular representatives in Greek even of an original  $\alpha$ . After the original  $a$  had at a far earlier period split into  $a, e, o$ , the majority of the Greek dialects remained at this stage, while the Aeolic dialect, and, evidently at a much later period, the Italic languages, went one step further, frequently weakening  $e$  and  $o$  into  $i$  and  $u$ . In this respect, therefore, the vowel-system of Greek is, on the whole, older than that of Latin, though this has on the other hand preserved much in its consonant-system more faithfully from the primitive  
 441 time than Greek has. The splitting of the  $a$  into the triple chord cannot occupy us further here, when we are proceeding to the irregular substitution of sounds. It can only be understood from the particular conditions of the individual words, and hence it falls within the sphere of specifically Greek phonetics, which is foreign to these investigations. We here regard etymology as the science of the discovery of the origin of words. The etymologist may expect for every Greek  $a, e, o$  an original  $a$ , for  $\bar{a}, \eta, \omega$  an  $\bar{a}$ . That is sufficient for our present position. But certainly recent investigation has taught us to pay more attention also to the differences of the  $a$  within the European languages. Various aspects of the question have already been discussed on p. 51 ff.<sup>1</sup>

When we pass on to the consonants, we have first to take into consideration the relation of the two main classes of consonants to one another. How are the explosive or momentary consonants related to the fricative or continuous sounds? At first sight it might seem as though the latter class were the stronger, inasmuch as we hear a stronger

<sup>1</sup> Besides the recent attempts to establish greater antiquity of the European variety of vocalism compared with the monotony of the Asiatic languages, mentioned on p. 93, we must notice now the acute '*Essai d'une distinction des différents a Indo-Européens*' of F. de Saussure in the '*Mém. d. l. Soc. de Linguistique*' iii. p. 359 ff.



sound, when an *r* is vigorously rolled, or an *s* is thoroughly hissed on the teeth, than in the case of *t* or *d*. But it is not the strength of the sound which reaches the ear, with which an investigation is concerned, but the force of articulation. The explosive sounds, called in the older terminology mutes, are produced, physiologists tell us, by causing an obstruction at a certain place in the mouth, and then letting the breath pour out at one moment (Brücke 'Grundzüge der Phys. u. Syst. der Sprachlaute' p. 41); while the fricative or continuous sounds on the other hand are produced, when at a certain place in the organs of speech there is merely a 'narrowing' caused, in consequence of which the breath, as it streams out, presses through or *rubs*, and thus produces a sound. Hence we cannot doubt which class of consonants requires the more energy: of course it is the former, inasmuch as obstruction is an action of greater force than narrowing. We shall therefore be inclined, in cases where two sounds appear to correspond etymologically, to ascribe the priority to the explosive over the continuous sound, and to explain the transition of the former into the latter as a gradual enfeebling of articulation. It is in agreement with this view that the changes of *t* into *s*—Indo-G. and Lat. *tu*, Dor. *τύ*, common 442 Greek *σύ*, of *d* into *l*—Gk. *δάκρυ*, OLat. *dacruma* (No. 10), later *lacruma*, of *d* into *r*—Lat. *ar-vorsum* for *ad-vorsum*, of *b* into *v*—Ital. *avere* = Lat. *habere*, of *c* = *k* into a sibilant—*centum* = *kentum*, Fr. *cent*, of *g* into *j* (*y*)—*Geist* in Berlin pronounced *Jeist* (*Yeist*)—always in this direction, not in the reverse order, are universally recognized, and may be established by countless examples from periods of languages, which may be known historically with completeness. But to these also belong a number of other changes, which are in part yet stronger, and which have to be explained by means of intermediate steps. For instance, there is the regular transition from *k* to *ç* in Sanskrit and Persian, discussed on pp. 27 ff. and 86 ff. If the Slavonic languages go one step further, replacing the primitive *k* by the dental *s*, this change too finds its place here: hence e.g. that of the Indo-G. *daṣan*, Skt. *daṣan* into ChSl. *desqŭ* (No. 12), towards which we have perhaps the intermediate stage retained in the Lith.

*dézimtis*, for the *sz* here sounds like the German *sch* [Eng. *sh*], and is therefore related to the original *k* just as the initial sound of the Fr. *cheval* is to that of the Lat. *caballus*. The replacement of the Old Greek aspirates *kh*, *th*, *ph* by the Modern Greek spirants  $\chi$ ,  $\theta$  (= Eng. *th*),  $\phi$  (= *f*), and the change from the soft aspirates *gh* and *bh*, which can still be proved to have existed in the earliest Italian period, into the Italian spirants *h* and *f* belonged to the same category (p. 422). Similarly by intermediate stages in the Romance languages *v* develops out of *p* (intermediate stage *b*) — Fr. *savoir* = *sapere* — in the Slavo-Lithuanian, *z* and *ž* out of *g* — ChSl. *zna-ti*, Lith. *žin-áu*, Indo-G. rt. *gna* ‘recognize’ (No. 135) the lispingly pronounced  $\delta$  in Modern Greek, e.g. *δέν* = *ούδέν* — and *d* in Danish, e.g. in the name *Madvig* — from the full medial. But if we are thus justified in expecting as a rule the transition from explosive to fricative sounds, and not the reverse, we may at the same time point out here, that there are important exceptions. One of the most widely-extended and important is the change of an original *v* into *g*, which we find in Greek dialects, and still more plainly in the Romance languages (Ital. *golpe* = *vulpes*). But we shall soon explain more in detail how this phonetic change is not immediate, but is brought about by a prefixed parasitic *g*, and thus through the intermedial step *gv*. If any one chose to compare the Homeric particle of comparison  $\phi\eta$  immediately with the stem of the reflexive pronoun *Fε*, he might easily be brought to assume a direct transition from *F* into  $\phi$ , as Pott does, who compares  $\phi\eta$  with the Skt. *vā*, ‘or’ (ii<sup>1</sup>. 318). But the reflexive stem *Fε* had  
 443 originally the form  $\sigma F\epsilon$ . The hard sibilant probably did not agree well with the soft labial spirant. Either it hardened the *F* by assimilating influence into the aspirate  $\phi$ <sup>1</sup>; thus arose the stem  $\sigma\phi\epsilon$  in  $\sigma\phi\epsilon\iota\varsigma$ ,  $\sigma\phi\epsilon\tau\epsilon\pi\omicron\varsigma$ , or it gave way before the *F*, which, later on, being left defenceless, was weakened into the mere breathing: *Fε*, *έ*. But as an initial  $\sigma$ , when followed by other consonants, sometimes, as was shown on p. 429, falls away, especially in the Laconian dialect:  $\phi\alpha\iota\rho\acute{\iota}\delta\delta\epsilon\iota\nu$  =  $\sigma\phi\alpha\iota\rho\acute{\iota}\zeta\epsilon\iota\nu$ , and in the dat. plur. of this very stem  $\phi\acute{\iota}$  =  $\sigma\phi\acute{\iota}$

<sup>1</sup> We noticed at No. 605 Fick's disagreement with this view.



(Ahrens 'Dor.' 109),  $\sigma\phi\epsilon$  might thus also become  $\phi\epsilon$ , and the Homeric  $\phi\eta$  might come from  $\sigma\phi\eta$ , identical with the Goth. *své* 'as' (cp. No. 601). Here then the origination of the more forcible sound from the weaker is explained by the influence of juxtaposition, just as in Persian the combination  $\zeta v$  becomes  $gp$ : Zd.  $gpā$  = Skt.  $\zeta vā$  (St. *ζvan* for *kvan* No. 84). And the case is the same with the change of a  $f$  into  $\beta$  before  $\rho$ , which is common in the Aeolic of Lesbos:  $\beta\rho\eta$ - $\tau\omega\rho$  for  $f\rho\eta$ - $\tau\omega\rho$  (No. 493). Here the dissimilating influence of the following liquid brings about the strengthening of the soft spirant. For the aversion of the Romans to the combination *vu* produced from the stem *feru* *ferb-ui*, and perhaps it was the similar influence of a Gk. *o* which produced from the Graeco-Italic stem *vol* (Lat. *vol-o*) the Greek  $\beta\omicron\lambda$  ( $\beta\omicron\lambda\omicron\mu\alpha\iota$ ). All this has only been mentioned here in order to set aside hasty objections, and to prepare the way for further investigations. For it is just as important, in the sphere of sporadic changes, with which we are now dealing, to establish their main direction, as it is on the other hand to leave open the possibility of exceptions; although before admitting these we must require for them the evidence of special occasions and indubitable analogies. The task of the student of language in such questions is like that of the geographer. It is not enough to have discovered the general direction of a current in the sea; it is necessary to follow this out in its deviations, its shiftings, back-eddies and the like which are produced by special causes. But such deviations do not contradict, they rather confirm, the existence of this main direction. Other cases of the change of a continuous sound into an explosive we admitted on p. 425. In Latin, as in German, an *f* within a word has become a *b*. We endeavoured to explain this by supposing that *b* was in this case originally only the incompletely articulated beginning of an *f*. In the same way we ought to regard the Teutonic *d* as compared with the  $\beta$  (Engl. *th*) of earlier stages in the languages. In Greek we may find  $\tau\tau$  taking the place of  $\sigma\sigma$ , and <sup>444</sup> even  $\tau$  replacing a single  $\sigma$ , though both not without the conjecture that these *t*-sounds were by no means identical

in pronunciation with the ordinary ones in Greek. But the analogies of living languages are not wanting for these surprising assumptions. We must, however, in investigations of this kind avoid also the opposite error, that of admitting too readily changes which follow the general direction. Languages are inclined indeed to weakenings, but they can also avoid them: with all their changeableness, there is a great persistency shown in the history of languages. Hence nothing would be more perverse than to suppose that changes corresponding to the fundamental direction are to a certain extent to be expected everywhere, or that there is an unsteady fluctuation of such a nature that occasionally the stronger sound may, in some ramification or other of a root, change into the weaker. In this respect every language is to be regarded as an unbroken whole throughout, and even changes which are in themselves not improbable can only be proved to be facts by the evidence of undoubted instances.

After this digression we return to the several consonants. We had determined the natural relation of the explosive to the fricative sounds to be this, that the former are inclined to pass into the latter, but not the latter into the former. But how is it with the several subdivisions within these two classes? As to the explosives, it may be considered on the whole as an admitted fact that the *tenuis* is stronger than the *medial*. I may on this point refer to p. 420. The change of the *tenuis* into the *medial*, which we should for this reason expect, is thus also one of the most incontestable phenomena of language. The extent to which it is to be admitted in Greek will become apparent hereafter: but we may here point out some certain instances of it, as for example the derivation of ἀρήγω from rt. ἀρκ, ἀλκ (No. 7), that of τήγ-ανο-ν from the stem of τήκω (No. 231), that of the rt. μυγ, μίσγω by the side of Skt. *miç*, Lat. *misceo* (No. 474). The same change is familiar in Latin words like *vī-gintī* by the side of the Boeot. *ῥί-κατι* (No. 16), *neg-lego* for *nec-lego*, *publ-icu-s* compared with Old Lat. *popl-icu-s*, *quadra-ginta* by the side of *quattuor*, and in numerous Romance forms, like It. *lagrima* = *lacrima*, Fr. *abeille* = *apicula*, It. *lido* = *litus*. We must not, however, overlook the fact that in all the cases quoted and in

many others the softening takes place in the middle of the word, and is undoubtedly closely connected with the influences which the hard explosive sound experiences from the surrounding vowels, nasals, and liquids. (Cp. Corssen 'Beitr.' 53, 83, 445 i<sup>2</sup>. 77, 126, 207.) The medial, inasmuch as, according to the statements of physiologists, it contains or can contain 'voice,' is from this very reason nearer to these sounds than the tenuis.

The relation of the Greek aspirate to the corresponding tenuis is at first sight less clear. We might be inclined to assume a  $\chi$ , equivalent, as we saw, to  $k + h$ , to be stronger than  $k$ , and of course similarly for  $\theta$  as compared with  $\tau$ , and for  $\phi$  as compared with  $\pi$ . But Sanskrit alone is sufficient to warn us to be cautious. Here, as has been already mentioned, the hard aspirate arises often in a time which can be historically demonstrated, from an earlier tenuis, e. g. that of *pra-tha-má-s* 'the first,' where the suffix is the same as that of the Latin *in-tu-mu-s*, *op-tu-mu-s*, and the *-ta-ma-s* preserved even in Sanskrit in many superlatives. In the same way we find in Greek  $\kappa\epsilon\phi-\alpha\lambda\acute{\eta}$  by Skt. *kap-ála-s* and Lat. *cap-ut* (No. 54). We have already (p. 431) discussed the aspiration of a tenuis as a phonetic affection, and inasmuch as the strength of articulation betrays itself especially in the exclusion of all accompanying sound, the true view of this process will be to regard the addition of a thick breathing after the tenuis as a more incomplete, less pure and therefore weaker articulation. The tenuis cannot have been universally preserved quite in its original form, any more than the  $a$ ; just as the  $a$  by fluctuations of the organs of articulation in the direction of the  $u$  and  $i$  passes into  $o$  and  $e$ , so we find this breathing sometimes as an attendant on the tenuis.

But there are changes not only in respect of quality and degree, but also in respect of the so-called organ, or, more correctly speaking, the place of articulation. Now is it possible to prove an order of succession also for the organs, as compared with each other, or does the relation of the gutturals to the labials and the dentals defy any such estimation according to the strength of articulation? It was certainly not by accident that the Indian grammarians placed the consonants in the order in which Sanskrit grammar still arranges them.



They put the gutturals first, and after them the remaining explosive and nasal sounds, in the order in which they are produced in the mouth, proceeding from the back forwards; i. e. gutturals, palatals, linguals, dentals, labials. And this order reappears in the class of the semi-vowels *j, r, l, v*, and in the sibilants *ç, sh, s*, until finally the list is closed by *h*, which belongs to no part of the mouth in particular. This order of the organs corresponds to the historical succession, in which the sounds  
 446 proceed from one another, at any rate in so far that we see the first class of the consonants, the gutturals, passing into the following classes, but not *vice versa*. Of course we do not assert that at a certain stage in the history of language there were only gutturals, and then by the side of them dentals, it may be, and so on. The question of priority, so stated, is absurd: nothing induces us to assume that at any time any one of the three main parts of the mouth, at which the gutturals, dentals, and labials are produced, was ever entirely unused. It is surprising that even a sober and cautious scholar like Heyse, in his 'System der Sprachwissenschaft' (p. 117 ff.) takes the trouble to draw up from this point of view a 'list of the order of the origination' of the consonants according to their organs. But we may certainly venture to assert that the gutturals, which are the hardest for children to pronounce, require the greatest force of articulation<sup>1</sup>, and therefore, as laxity and ease of articulation increase in the course of the history of language, pass readily into the sounds belonging to other organs, but rarely if ever arise out of them; so that thus the direction of the change of organ is on the whole from the back forwards. The greater ease with which

<sup>1</sup> The fact, which Max Müller 'Lectures' ii. 164 quotes, that some Polynesian languages are entirely without gutturals, while the dentals are found everywhere, is quite in harmony with this view.—The disinclination of the Keltic languages to the *p* is remarkable. Cp. Nos. 214, 366, 367b, 371, 390, 392, 393, etc. No word has yet been adduced in which the two main divisions of this family retained in common the Indo-Germanic *p*. On the other hand a *p* appears often in the British branch in the place of an Indo-G. *k* (*qu*), as is shown under No. 624 ff. Cp. now Windisch 'Beitr.' viii. 1 ff., Rhys 'Rev. Celt.' ii. 321 ff., Stokes *ibid.* 408 ff.

dentals are pronounced as compared with the sounds of the other organs may be recognized sufficiently from the fact that they occur by far the most commonly in the formal elements of language, in the terminations of inflexion and word-formation, as also from the fact that almost the only groups of explosives which are found, are those in which the *second* consonant is a dental: *kt, gd, pt, bd*, etc., and the order is never reversed. We should also notice here the fact, to which Pott<sup>2</sup>. 211 calls attention, that it is almost only dentals and labials which are found in the prepositions of the Indo-Germanic languages. Of course, when Pott adds the remark, that these seem to be the 'most primitive' sounds, we cannot follow him in this, nor think of such a thing for a moment. Are we really required to regard the pronominal and the numerous verbal roots of our linguistic stem, which contain a guttural, as less 'primitive?' Where is there the shadow of a proof of this? I rather take the circumstance adduced to mean that the dentals and the 447 labials were of less significance than the gutturals, and were therefore better adapted for that whole class of words of lighter stamp, so to speak: while the gutturals, which could only be brought out by a more forcible movement of the heavier back part of the tongue, which furnished more resistance, found their chief employment in the most significant part of the vocabulary. This fact is again the main reason why the dentals and labials are so much more numerous than the gutturals, as Förstemann 'Ztschr.' i. 169, ii. 37 shows with regard to Sanskrit, Greek, Latin, and Gothic. But the gutturals were in many ways driven out of the sphere which was originally their own, and replaced by their front-rank men. To take a few examples out of many. In Sanskrit many gutturals pass into palatals, with regard to which we may refer to p. 26; in Greek we find, in the same place, as we shall see more fully below, not unfrequently instead of these, labials: Skt. interrogative stem *ka*, Lat. *quo*, Gk. *πο* (only in New Ion. *κο*), rt. *ga* 'go,' Gk. *βα*; more rarely dentals: Skt. *kim*, Lat. *quid*, Gk. *τί*. The original *dh* is not uncommonly replaced by *f* in the Italian languages, and also by *b* in the middle of Latin words: Skt. *mádhjā* (fem.), Osc. *mefiu* (No. 469), Skt. *rudhirá-s*, Gk. *ἐρυθρό-s*, Lat. *ruber*, Umbr. *rufriu* (No. 306), a partial shifting



from the dental to the labial organ, and thus again in the forwards direction. Cp. Corssen i<sup>2</sup>. 148 ff. The changes of the Lat. *c* and *g* before *e* and *i* in the Romance languages are produced in such a way that the guttural first becomes palatal, and then from this point gets shifted further forwards (Lepsius 'Das allgemeine linguistische Alphabet' p. 39). Precisely the same course is found in the case of the similar changes in the Lettic, Slavonic, Teutonic and numerous other languages, as is shown most fully by Schleicher 'Zur vergleichenden Sprachengeschichte.' It is true that in this sphere of what Schleicher calls Zetacism, to which we shall have hereafter to return, movements in another direction are not wholly wanting. There is especially a shifting, from the influence of contiguous sounds, both of a dental and occasionally of a labial into a palatal sibilant. Indeed in some dialects under particular conditions there is actually a change from *p* into *k*, as in the dialect of Naples under the influence of an *l* which has been softened to an *i*, e. g. *chiano*=*planus* (Wentrup 'Beiträge zur Kenntniss der neapolit. Mundart' Wittenb. 1855 p. 11, cp. 448 Diez i. 270)<sup>1</sup>. But cases of this kind belong, like zetacism generally, to the sphere of assimilation in the wider sense, and prove absolutely nothing against the main direction which we have asserted. The transference of a consonant from one point of articulation to another will, as a rule, have its main reason in such special influences of assimilation or dissimilation. Where there is such an essential change of the original sound we cannot possibly content ourselves with the assumption of degeneration or 'weathering away,' and hence we shall have to look about afterwards for adequate explanations of Greek linguistic processes of this kind. Here all that was necessary was to clear the way for our subsequent investigations by pointing out the prevalent direction of phonetic change<sup>2</sup>.

<sup>1</sup> The change from *pt* to *kt* is found in Irish: *secht* (No. 337)=Skt. *saptán*, and also in borrowed words: *corcur*=*purpura*, *clum*=*pluma* ('Beitr.' viii. 116).

<sup>2</sup> With regard to the relation of the dental consonants to the labials, it is hard to prove any definite relation of priority between these classes. Ludw. Lange 'Ztschr. f. d. österr. Gymn.' 1863 p. 299



If we now proceed from the explosives to the fricatives, we shall find it easiest to recognize a well-established rule for the relation of the nasals to each other. The guttural nasal is a rare sound in all Indo-Germanic languages. It only occurs before other gutturals, and therefore it depends upon these, and can change into the nasal of another organ only when the explosive which follows it also changes its organ. Thus the *n* in the Lat. *vincere*, i. e. *vinkere*, is clearly guttural: in the Ital. *vincere* it is palatal, in the Provençal *vensser* (Diez 'Gr.' i. 235) it is dental. But the other nasals enjoy greater freedom. It is certainly generally the rule that, where *m* and *n* correspond, *m* is the older sound: and this is especially the case at the end of a word, where Greek *ν* corresponds so often to the primitive *m*: δόμο-ν=Skt. *damá-m*, Lat. *domu-m*. For the origin of this phonetic rule I may now be permitted to refer to what I have said in my paper 'Zu den Auslautgesetzen des Griechischen' in the 'Stud.' x. 203 ff. We find the same phenomenon occasionally in German, e.g. *Faden* for the older *fadam* (Grimm 'Wörterb.' s. v.), regularly in Old Prussian (Bopp 'Die Sprache der alten Preussen' p. 11), and in Old Irish (e.g. *ech n-aile*=*equum alium*), and in two languages, which are still more closely related to Greek, the Albanian and the Messapian (G. Stier 'Hieronymi de Rada carmina italo-albanica' Brunsv. 1856 p. 56, Bopp 'Üb. das Albanesische' p. 4, 'Bulletino dell' Inst. arch.' 1859 p. 215). In the Romance languages this change is not confined to the end of a word: Fr. *rien*=*rem*, 449 It. *con*=*cum*; it appears sometimes also in other places: Fr. *natte*=*mappa*, Wall. *furnice*=*formica* (Diez i. 199 [Brachet 'Etymological Dictionary' s. v. *changer*]). The reverse transition also occurs in these languages, though more rarely: Span. *mueso* for *nuestro* (i. 203): and we can hardly deny its existence altogether in the earlier stage of language; so that a greater mobility must be generally ascribed to these more volatile sounds.

With regard to the two liquids *r* and *l* thus much is certain, adduces several reasons in favour of the greater difficulty of the labials, which are well worth considering. But on the other hand the change of the dental aspirate at least into the labial is, as we shall see below, a fact which cannot be denied away.

that greater force is required for that vibration of the tongue, by which the 'trill' *r* is produced, than for that loose position of the same organ, in which *l* arises. Hence the priority of *r* over *l* is in numberless cases a recognized fact. Sanskrit very often preserves the more forcible sound in words, where the European languages prefer the softer *l* (Lottner 'Ztschr.' vii. 16 [Fick 'Indo-germanen Europas' pp. 201-261]), as e. g. in rt. *ruk* = Gk. *λυκ*, Lat. *luc* (No. 88), rt. *bhrāj* = Gk. *φλεγ*, Lat. *flag*, *fulg* (No. 161). For the same reason *r* is a much more common sound in Sanskrit than *l*, and is proportionally more frequent than it is in the two classical languages (Förstermann 'Ztschr.' ii. 39). The relation is less firmly established in modern languages. A Romance *l* often appears in the place of a Latin *r*, e. g. It. *pellegrino* = *peregrinus*, *Tivoli* = *Tibur*; but it is hardly less common to find *r* in the place of *l*: It. *rossignuolo* = *lusciniolus*, Fr. *apôtre* = *apostolus* (Diez i. 189, 207). For a later stage in language, therefore, *r* and *l* are almost equivalent, and the choice between the two often depends upon the influences of contiguous sounds: while, for an earlier stage, it is certain that *r* is the older sound. We are not, however, justified, as was noticed on p. 83, and as will be seen still more clearly from the more careful examination of the Greek sounds, in denying wholly to the period before the separation of languages the sound *l*.

It is more difficult to say what is the genetic relation of the spirants one to another. May we assume a transition of the sounds *j*, *s*, *v*, *h* into each other; and if so, how? It is certain that of these sounds the weakest is *h*, in those languages in which this character denotes the mere breathing, becoming fricative at no part of the mouth, and being thus the minimum of sound which falls within the sphere of language. Hence of the Indo-Germanic *j*, *s*, *v* there is often nothing left in Greek but the spiritus asper (Nos. 606-608, 598-605, 565, 566). The sibilant of a *j* plays an important part in the phenomena of  
 450 zetacism. But it is only the soft sibilant, denoted in French as in the Slavonic languages by *z*, which we can expect to find in the place of *j*: this letter hardly ever passes directly into the sharp, hard *s*. It would be still more unlikely that *j*

should pass into  $v$ <sup>1</sup>; and we should have to regard the appearance of a Greek  $F$  in places, where we may presume an older  $j$  ( $\tau\lambda\alpha\sigma\tilde{\alpha}Fo$ ,  $F\acute{o}\tau\iota$  on inscriptions, cp. p. 396), as such a transition. But as adequate analogies can hardly be found for this<sup>2</sup>, it will be safer to assume instead of a phonetic confusion, one which is merely graphic, i. e. an unsatisfactory and clumsy way of writing the  $j$ , which was still retained dialectically, but which could not be expressed by any character in use. It is not necessary to remind the reader how entirely improbable *a priori* is the change of an  $s$  or a spiritus asper into  $F$ . From the earliest period of the Hellenic language, of which we have any knowledge, the digamma is found to be disappearing. How can we conceive of it taking the place of sounds so common as  $s$  and the spiritus asper?

But finally, the various classes of the fricatives have their points of mutual contact. Thus there is an interchange between the liquid  $l$ , and that one of the nasals which is the most nearly related to it, i. e.  $n$ , in which it is not very easy to determine from a general standpoint the question of priority. With respect to Greek in no inconsiderable number of words in the Doric dialect (Ahrens 'Dor.' 110)  $\lambda$  before  $\tau$  or  $\theta$  (Lacon.  $\sigma$ ) passes into  $\nu$ ;  $\phi\acute{\iota}\nu\text{-}\tau\alpha\tau\sigma\text{-}s = \phi\acute{\iota}\lambda\tau\alpha\tau\sigma\text{-}$ ,  $\acute{\epsilon}\nu\theta\epsilon\acute{\iota}\nu = \acute{\epsilon}\lambda\theta\epsilon\acute{\iota}\nu$ , a phenomenon which we may safely regard as a rare kind of assimilation, for these dental explosives come nearer to the dental nasal than to  $l$ , the sound of which is produced at the edges of the tongue. Bugge 'Ztschr.' xx. 43 attempts to prove the reverse transition to a wider extent. But I know no certain example of it from Greek, except the form  $\lambda\acute{\iota}\tau\rho\sigma\text{-}\nu$  for  $\nu\acute{\iota}\tau\rho\sigma\text{-}\nu$ , recommended by the Atticists (cp. Lobeck 'Phryn.' p. 305) and prevalent in Herodotus [cp. Bähr<sup>2</sup> on ii. 86]. But this is certainly borrowed and corresponds to the Hebr. *neter* (Benf. ii. 57). The doubt of A. Müller in

<sup>1</sup> The reverse change from  $v$  into  $j$  occurs in Wallachian: *jīnu* = *vinum* (Diez i. 350).

<sup>2</sup> I cannot be satisfied even by what Usener collects, 'Fleckeisen's Jahrb.' 1865 p. 233 note. For after all it is merely a conjecture that  $\omega\beta\acute{\alpha}$  'tribus' (cp. p. 207) is from *\*vas-jā*. How easy it is to suppose that some other root or some other suffix (*\*vas-vā*?) occurs here!



Bezzenberger's 'Beitr.' i. 294 refers, as it seems, only to the original Semitic character of the word. Cp. also Vaníček's 'Fremdwörter' p. 36. There is also *λίκνον* 'a winnowing fan,' which is discussed more fully by Bugge 'Stud.' iv. 335. The Lithuanian *nėkóti* 'to toss corn in a winnow,' makes it probable that the forms occurring in Hesych. *νίκλον* τὸ λίκνον, νεῖκλον τὸ λίκνον, νίκειν λικμᾶν, νεκητήρ (M. Schmidt νεικλητήρ) λικμητήρ, Μεγαρεῖς, give the original initial letter of the root, which was possibly dissimilated to λ in *λίκνον*, *λικμό-s* 'winnow,' under the influence of the following nasal. Cp. Fick i<sup>3</sup>. 651. The isolated glosses of Hesych. Ἐλιπεύς · ὁ Ἐνιπεὺς ποταμός, φίλαξ· δρῦς νέος Ἡλείοι beside φίνακα · δρῦν, to which H. W. Roscher has called my attention, are not clear enough to enable us to decide which sound in the dialectical variation is the older. The conjecture of Fick i<sup>3</sup>. 825 that the Thessalian *ἀστραλό-s* (No. 521) quite corresponds to the equivalent Lat. *sturnu-s* has no great probability, considering how favourite a suffix -λο is. The form *ἄλλο-s*, which generally used to be compared with Skt. *anjá-s*, and which has an *l* in three other groups of speech, was taken by us otherwise (No. 524: cp. Schleicher 'Comp.'<sup>4</sup> 218 note 2). Other words quoted by Christ p. 98 (cp. Leo Meyer 'Vgl. Gr.' i. 65) are partly very doubtful, partly, e.g. μέλλειν No. 466, explained by us otherwise, and, as I believe, more probably. *πλεύμων* by the side of *πνεύμων* holds an exceptional position, because we have to do with the letters *πν*, which do not occur elsewhere. We discussed it under No. 370. Leo Meyer in Bezzenberger's 'Beitr.' ii. 106, in spite of this, chooses to regard the transition from *n* into *l* as an admitted fact, and bases upon this his conjecture that Lat. *elementum*, which we explained otherwise under No. 523 b, corresponds to the Skt. *an-i-mán* 'thinness' (of the air), 'small part' (cp. *anú-s* 'fine,' 'small'). In the Romance languages there is abundant evidence for the change in both directions. The change from *n* to *l* seems somewhat the more common, but it is connected with the tendency to dissimilation: Ital. *Bologna* = *Bononia*, *veleno* = *venenum*; but the reverse is also fully established, Provenc. *namela* 'blade' = *lamella* (Diez i. 203, 190). In these languages the sounds *r*, *l*, *n* are generally the

most mutable of all, so that even *r* occasionally takes the place of *n* (Span. *hombre*=*hominem*, Fr. *timbre*=*tympanum*), though the converse is rare (Diez i. 203, 208). On the whole, we might be inclined to ascribe to the nasal a stronger articulation than to the liquid, inasmuch as it is more closely connected than the latter with a definite place in the organ of speech. However, the interchange between a nasal and a liquid does not come into consideration for the questions which we have here to discuss. It is true that, after Ebel 'Ztschr.' iv. 338, for the first time, so far as I know, and not without doubt, had suggested the possibility of the transition from *n* to *r*, Benfey 'Ztschr.' vii. 120, and especially 'Orient und Occident' i. 287, treated the sounds *n* and *r* as if they 452 were as good as identical, and employed this assumption to derive numerous suffixes with *r* from suffixes with *n*. But this only shows very plainly how rotten is the phonetic foundation which supports the theory of 'theme-formation,' and of suffix-mutilation, rejected by us on p. 74. For we do not need such a transition for these suffixes, if we recognize an original variety; and in stem-syllables there is not a single instance in which the change of *n* into *r* may be proved<sup>1</sup>.

<sup>1</sup> Nothing has been brought forward recently to make probable this phonetic change, often as it has been defended. Leo Meyer 'Vgl. Gr.' ii. 126 quotes the Romance transition from *n* into *r*, referred to above. But according to Diez this is common only in the case of certain groups of consonants, which like *cn* (Fr. *diacre*=*diaconus*), *dn* (*Londres, ordre*) would be otherwise hard to pronounce, and we can see how much we have to do here with carelessly articulated sounds, from the fact that the converse change also occurs (Wallach. *suspina*=*suspirare*). Schweizer 'Ztschr.' xii. 301 appeals to the Swiss *niemer*=*niemand* and the South German *mer*=*man*. But the same explanation applies to this final *r*, which has but a weak sound here, and this would at any rate prove nothing for a letter in the middle of a word. Sonne, an opponent of the participial theory, assumes for the forms of the 3 plur. act. Zend in *-are*, a derivation from *ars*=*ans*, *ant* ('Ztschr.' xii. 288). If this view were correct (cp. Spiegel 'Beitr.' ii. 23, Kuhn iv. 211), though this seems to me very doubtful, after the remarks of Schleicher ('Comp.'<sup>3</sup> p. 666), this would only be an example of a single group of letters, and further one derived from an entirely different region of language. We are therefore



As to the relation of the sibilant *s* to *r*, we must ascribe to the sharp *s*, which is produced with a steady tongue against the upper row of teeth, an unqualified precedence over the trill. It is therefore a recognized fact in the history of language that where there is a change between *s* and *r* the priority belongs to the *s* (Pott i<sup>1</sup>. 131, Diez 'Vergl. Gr.' i. 222). The converse transition, that of an *r* within a word to a soft *s* (*z*), e. g. *pèze* = *père*, has been established from French dialects of the sixteenth century (Joret 'Mémoires' iii. 155). In Greek and Latin it does not come into consideration. The 'Zitterlaut' [trill], as Brücke calls it, can be produced at different places in the mouth, especially either at the back of the palate, or with the point of the tongue at the root of the upper row of teeth. We may probably assume that it is only the latter sound, described by Brücke<sup>2</sup> p. 58, which can originate immediately in the dental sibilant, inasmuch as it closely approximates to the place of its articulation. Hence Corssen i<sup>2</sup>. 238 justly deduces from the frequent origination  
 453 of a Latin *r* from an earlier *s* the more dental pronunciation of the former sound, and he properly connects with this the change from *d* to *r* in the same family of speech, which may be compared with respect to the place of articulation. The Teutonic change of these sounds may best be compared with the Italian. In both families it is found especially in the middle of a word between two vowels, but also at the end. It seems to be quite unknown at the beginning.

With the Greeks, it is only in a few dialects that *σ* passes into *ρ*. The discovery of inscriptions has made not unimportant new contributions to our knowledge of this. We now know of two kinds of rhotacism. The one attacks only a sigma between two vowels within a word, and has been established by an inscription from Eretria, ascribed to the fourth century B. C. and published first by Eustratiades in the 'Αρχαιολογική Έφημερίς Περ. β, τεύχος ιέ (1872) No. 417. This rhotacism therefore corresponds to the Latin, but with the difference that it does not, as with the Romans, attack

by no means justified in assuming such a change for the time before the separation of languages, to which we can by no means ascribe such lax articulation.



an original *σ*, but so far as we see at present only one of later origin: *δπόραι* = *δπόσαι*, *ἄρχουριν* = *ἄρχουσιν*, *ὀμνυούρας*, *παραβαίνωριν*. — The second kind conversely shows itself especially at the end of a word: *τίρ* = *τίς* (Laconian), but never in the middle of a word between vowels, but only before consonants. Elic *κορμῆται* = *κοσμῆται* (cp. *car-men* for *cas-men* Corssen 'Beitr.' 406). The sphere of this second rhotacism is Elis and Laconia. In Elis we can now trace in inscriptions the spread of the *ρ*. The ancient *φράτρα* (C. I. No. 11) shows the forms *τοῖς* and *τοῖρ*, *τίς* and *τίρ* side by side, the older forms before vowels, and at the end of a division, the later before consonants. The inscription of seven lines from Olympia, published by Kirchhoff in the 'Archaeol. Ztg.' Jahrg. 35 p. 197 shows *τίς* only before a following *σ* (*αἱ δέ τις συλᾶ*), but *τοῖρ* *Χαλαδρίοιρ* καὶ . . . The inscription of Damokrates ('Archaeol. Ztg.' 1876 p. 183 ff.) from the time after Alexander, changes every final *σ* into *ρ*. Perhaps we may explain from similar conditions of the change in Laconia the surprising fact that no grammarian mentions it among the peculiarities of the Laconian dialect, and yet a considerable number of glosses in Hesychius leave no doubt as to its occurrence in Laconia. The great majority of these glosses, enumerated by Ahrens 'Dor.' 71 ff. show the *ρ* at the end of a word<sup>1</sup>. We find the same in a solitary example in Aristophanes ('Lysistr.' 988 *παλεόρ* γα). If we suppose that the Laconians changed *ς* into *ρ* only when final, 454 and before certain initial consonants, but elsewhere left it unaltered, we have an explanation on the one hand of the silence of the grammarians, who took as little notice of such a change as of *ἐμ παντί*, *ἐγ καιρῶ* and the like, and on the other hand of the Hesychian glosses, which may have been extracted by a gloss-writer from Laconian texts without noticing, or at any rate without paying any attention to, the context in each case. Even in Laconia rhotacism is decidedly a product of later times. This second rhotacism, which is to be carefully distinguished from the Italian, finds a certain analogy

<sup>1</sup> Mor. Schmidt 'Ztschr.' x. 206 proves that the change of *σ* into *ρ* in the middle of a word is not at all surely established for the Laconian dialect.

in the conditions under which a final *s* in Sanskrit passes into *r*, though these again are much more limited, and differ in many respects. But we cannot fail to see that the difference in the facts points to different natural causes, and consequently for the local dialects<sup>1</sup> which have this second rhotacism, to a relation between *σ* and *ρ* entirely different from the Italian. Of another Italian characteristic, i. e. the connexion between the *r* and the *d*, we cannot find the slightest trace in Greek, while the breathing, with which initial *ρ* was written<sup>2</sup>, essentially distinguishes the Greek trill from the Italian. Perhaps it is probable from these facts that the Greek *ρ*, at any rate in the majority of dialects, was produced further back in the mouth, a view to which Kuhn 'Ztschr.' iv. 31 was also led by his investigations 'on the phonetic developments connected with *s*.' But in any case we may distrust all etymologies of ordinary Greek words which are based upon this change, a point upon which Pott ('Personennamen' p. 29) has justly again laid stress. But etymologies are still always being proposed, resting upon this assumption, and indeed the converse transition from *ρ* to *σ* is not wholly unheard of. On this rests O. Müller's explanation of *Πελασγοί* from *rt. πελ* and *ἄργος*, but although, apart from this, the *f* preserved in the El. *Φάργον*, Lacon. *βέργον* disproves this etymology in the case of so old a word, it still finds supporters.

- 455 The other changes of a continuous sound into one of another class are reduced to the sporadic representation of *f* by *ρ* and the interchange between *f* and *μ*. The former substitution is limited to the Cretan dialect, and is indeed really established by only one certain instance, i. e. *τρέ' σέ Κρητες* (Hesych.), where *τρέ* has originated from *τφε* (Ahr. 'Dor.' 51, above p. 77). How little authority there really is for *δεδροικώς*, which is commonly said to be for *δεδφοικώς*, may be

<sup>1</sup> We may add the isolated Theraic *ΟΥΡΟΠΑΘΑΝΑΙΑΣ* (Weil 'Mittheilungen d. deutschen arch. Instituts in Athen.' ii. 77).

<sup>2</sup> There is a remarkable anticipation of the later way of writing the letters, established by the grammarians, in *PHOΦΑΙΣΙ* on the old inscription of Arniadas of Korkyra, discussed by Ross, 'Jahn's Jahrb.' vol. lxix. p. 544,—so far as I know the only one. It is true that here the breathing follows the *r*, after the Latin fashion: *Rhodus*.



seen from M. Schmidt's Hesychius. The MS. has *δεδροικώς* *δοικώς*<sup>1</sup>. I conjectured on No. 572 that the curious *ρίγα* *σιώπα*, derived from the same source, by the side of *ίγα* *σιώπα* *Κύπριοι*, was to be traced back to *σριγα*, *σφιγα*, and so reconciled with the ordinary Greek *σίγα*. The influence of a dental in juxtaposition is certainly to be taken into account in such cases, and a wider conclusion as to the affinity of the sounds *f* and *ρ* must not be based upon them. Kuhn 'Ztschr.' xv. 320 adduces Teutonic examples of *r* for *v*. Ferrar 'Comparative Grammar' i. 12 regards the *ρ* here as the interlabial trill, which certainly could easily originate in the labial aspirate. Grassmann ('Ztschr.' ix. 8) well connects the change of the *f* into *ρ* with the transition of the same spirant into *l*, which is unmistakeable in some Slavo-Lettish words (cp. above No. 252). Still we cannot follow him in assuming the gradual intermixture of an *r* with *v*, and unpronounceable roots like *dhvran*. L. Havet ('Mém.' ii. 317) takes the *r* to be due to a mistake of the grammarians, who, in reading the word, took the character *f* for *P*, in which case we should have to assume *f* in all the cases. But though *Γ* and *Τ*, both of which in Hes. stand for a mis-read *f*, do come near the digamma in form, *P* 456

<sup>1</sup> The view of the same scholar that the *ρ* was sometimes inserted in the Cretan dialect, as in Fr. *perdriz*=*perdix* (Diez i. 439) cannot be considered proved by the few and (in part) extremely uncertain glosses, which he quotes on behalf of it 'Ztschr.' xii. 214. Among these one is: *ἄτρεγκτος* *ἄβροχος*, i. e. *ἄ-τρεκ-το-ς*, in which we cannot fail to see that *τρ* again corresponds to an Indo-Germ. *tv*, for at No. 234 we connected *τέγω* with Goth. *thvaha*. But further the view that these glosses are Cretan is by no means established to the satisfaction of every one. (Cp. Rödiger 'Ztschr.' xvii. 314.) — A 'parasitic' *r* springing up after dentals, and gradually turning them into linguals, is conjectured also by J. for the Indian languages ('Or. u. Occ.' iii. 383) with the approval of Benfey. The latter 'On some Plural-forms' Gött. 1867 p. 15 actually makes an *r* 'hang on' (*anschiessen*) to an *n*, probably only a new and not very gentle way of saving the assumption of the change of an *n* into *r* mentioned on p. 452. How little the Greeks at any rate liked this 'hanging on' is shown by *ἀν-δ-ρ-ός*, cp. Fr. *cendre*=*cinerem*. But besides, it is really too much to ask us to believe in this.



does not. In Latin, some examples of *cv* changing into *cr* have been assumed (Grassmann 13); but some of these may be otherwise explained, and some need more thorough investigation after what Corssen 'Beitr.' 408 has said on the other side.

The relation of the two labial consonants  $\mu$  and  $f$  will have to be discussed below. It would hardly be possible to establish any physical reason for the priority of either.

### (A) Sporadic transformations of explosive sounds.

Now that we have been led by the preceding considerations to a common foundation for all sporadic transformations of sound, and have obtained a general view of the direction they take, we proceed to examine the changes in detail. In so doing we naturally start with those consonants which may be regarded as the most essential and significant elements of language. These are the explosive sounds, commonly called *mutae*. Of these again the *tenuis* must universally rank first and the medial and aspirate follow.

As we have seen, of all this class of consonants the gutturals are exposed to the most disfigurations. We have now to ascertain the extent and direction of their sporadic transformations in Greek. First we will examine the change of gutturals into labials, which may be aptly called Labialism.

#### 1. LABIALISM.

One of the earliest observations of comparative grammar was to the effect that several languages frequently show a *p* for an original *k* which is often represented in Sanskrit by *k*, and the labial media *b* for a *g* and its Indian representative *ḡ*. The facts themselves are, however, not enough; we must try and find the origin of a phenomenon at first sight so surprising. Lepsius was, as far as I know, the first to attempt to account for it. In his 'Sprachvergleichende Abhandlungen' p. 99 he arrives from an original *k* at *p* by the intermediate  
 457 steps *kv*, *kp*. But *kp*, as Pott has already objected against Lepsius ('Zählmethode' p. 176 n.), is too harsh a group of

sounds, and moreover never occurs in any simple Indo-Germanic word at all, and we cannot imagine its existence in the primitive Indo-Germanic tongue, especially at the beginning of a word. But as we see, in the case of *du*, *bellum*, and *bonus*, and *bis* springing from the Old-Latin *duellum* and *duonus* and the assumable *duis*<sup>1</sup>, *kv* will serve well enough as the intermediate step between *k* and *p*. For *kv* is to *p* as *du* is to *b*. The labial spirant *v* affected a preceding *k* or *g* in such a way that these letters moved from the guttural organ to the lips, but on becoming *pv* and *bv* they expelled the spirants themselves, and simple *p* and *b* were left. We find a striking analogy in the Sardinian dialect of Italian in which, as is alleged by Stier 'Ztschr.' xii. 156, and Delius 'Der sardinische Dialekt des 13. Jahrhunderts' Bonn 1864, the Lat. *quattuor* becomes—with softening of the tenuis to the medial—*battor*, *aqua abba*, *quinque quimbe*, *guardare bardare*, and *lingua limba*. Abundant instances of other kinds are given by Ascoli, whose comprehensive treatment of labialism 'Fonol.' p. 58 ff. (Germ. transl. p. 49 ff.) may here be referred to. The intermediate step above assumed may in many cases be actually seen:—often in Latin, occasionally, though perhaps not in its integrity, in Sanskrit and Lithuanian. To start with the latter case, it is clear that *ἵππο-s* with the by-form *ἱκκο-s* are to be compared directly with *equo-s*, and consequently that *ππ* and *κκ*, the result of assimilation, are here the representatives of *kv*. To this same *kv* we are brought by the Skt. *āṣ-va-s* and the Lith. fem. *asz-và* ('mare' = Skt. *āṣ-vā*), so that *ak-va-s* is here firmly established as the primary form. Moreover etymology confirms the view that the *k* was primitive; for it is very probable that the root of the primitive name of the horse, which is preserved also in the Old-Sax. *ēhu*, is *ak-* 'to be swift,' 'keen' (No. 2, cp. Pott. W. i. 525). We remain true then to our method of using what is clear to help us to the knowledge of what is not easily discernible, in pronouncing a Greek *π*, where it is confronted by an older *k*, to be in all cases the product of a pre-Hellenic *kv*. The circumstance that

<sup>1</sup> Ascoli well compares ('Fon.' Germ. Trans. 59) the provincial German *eppes*—*etwas*.



Latin has as a rule preserved this group of sounds in the form of *qu*, whereas Umbrian and Oscan as well as Greek in the majority of its dialects adopt the labial, inclines us to the belief that the *kv* belongs in such cases to the Graeco-Italic period.

- 458 In the example just discussed the *v* appears in several languages as a fully developed sound standing by the side of a guttural. In all other cases the same *v* appears as a subsequent addition to the simple *k*. For instance, the Lat. *quo* = Goth. *hva* of the interrogative stem is represented in Skt. by *ka*. We have however here to deal with the *k* which on p. 87 we saw must be distinguished from *k̑*, and which we thought we could define as a sound made right at the back of the palate. Various attempts had previously been made by different scholars to prove that the labial parasite of this *k* was a primitive sound. Since Fick's important investigations it seems to have become the generally accepted view that it is to this *k* alone, a sound now recognized as fundamentally distinct from *k̑*, to which we can attribute the tendency to produce after it the sound in question, a tendency which out of *k* in Latin produced in many instances a *kv* (*qu*), in Teutonic *hv* (later *w* alone), in most Greek dialects and also in Umbrian and Oscan—through a preliminary *κφ*—a *π*, while the remaining languages, like the later Ionic with its *κ* in the interrogative stem (*κῶς*, *κότερος*), kept the simple guttural. In the place of the latter the palatal *k̑* is of specially frequent occurrence in Sanskrit and Zend. The language which shows the closest resemblance to the Greek and Umbrian and Oscan is the British branch of the Keltic family with its late development of a *p*: e.g. Cymr. *puy* 'quis,' *petguar* 'four,' while Old-Irish has abandoned the labial parasite and reinstated the guttural in its integrity: e.g. *cia* 'quis,' *cethir* 'four' (cp. Windisch 'Beitr.' viii. 25). Thus regarded the whole phenomenon ceases to look fortuitous or capricious. Our reason for ascribing the production by a guttural of a labial among the Italic sound-changes is this, that Greek by no means excludes a *π* in all the words for which we must assume an old *k̑* or example the *κ* of *ἔ-λακ-ο-ν*, *λέλακα* (No. 85) is shown Lat. *loqu-o-r* to be the *k* which has a tendency to



labialism, but the tendency has in this root produced no result in Greek. The same may be said of *καπ-ύ-ω*, *καπ-νύ-ς* (No. 36) by the side of the Lith. *kvap-a-s* and the Lat. *vap-or* (for *\*cvap-or*) and of many other words besides. The same want of uniformity is to be seen in the British Keltic.

I think it is beyond a doubt that the same explanation applies to the change of *g* into *β*. The Lat. *ve-n-io* (No. 634) bears to the rt. *gā*, the same relation that *vap-or* bears to the rt. *kap*: it clearly points to a *\*gven-io*. The change of *gv* to *b*, corresponding to that of *kv* to *b*, occurs in the Umbrian *ben-ust* and the Greek *βαίνω*. In the case of the medial the labialism is confined to a still smaller number of stems. The antiquity of the parasitic labial is attested here too by many Teutonic words: e.g. by the OHG. *quillu*=*βάλλω* (No. 637) 459 *quiu-s*=*vī-vu-s*, cp. *βί(τ)-ο-ς* (No. 640), as well as by the Keltic *b*, which occurs e.g. in the OIr. *biu*=*vīvu-s*, and in the OIr. *bó*=*βoū-s*, Lat. *bō-s*.

It is remarkable, as Hugo Weber points out ('Etym. Unters.' i. p. 3), that the majority of instances of Greek labialism are never found at the beginning of a word except before a vowel, and never in the middle of a word except at the end of roots which were originally immediately followed by a vowel, that is, in cases in which the assumed *kv*, *gv* were easily pronounceable. Accordingly there will be no need to assume sound-formations like *kvr*, *gvl*. The only exception is *βρέφος* No. 645, in which case however it is not a far-fetched assumption that it arose by metathesis from *\*βερφος* (cp. *κράτος* by the side of *κάρος*). A similar exception is to be found in the OIr. *broo*, *bró* 'mill-stone,' gen. *broon*, *brón*, by the side of the Skt. *grāvan* 'stone used for pressing out the Soma-juice,' but here too, no doubt, *gar* was the real form of the root. On the other hand the recognition of this view casts suspicion *a priori* on many more venturesome hypotheses; e.g. that combated by me 'Ztschr.' iii. 415 as to the comparison of *πράσσω* with the Skt. *krī*. We will now proceed to the cases in which we believe we can with certainty set down a Greek *π* as the representative of an Indo-Germanic *k*.

## A.

A Greek  $\pi$  corresponds in the following cases to an Indo-Germanic  $k$ , which is frequently represented by  $p$  also in Umbrian, Oscan, and Brito-Keltic, by  $qu$  in Latin, not seldom by  $hv$  in Teutonic.

620. Root  $\text{F}\epsilon\pi$  call, say, aor.  $\text{ἐ-(F)}\epsilon\iota\pi\text{-o-}\nu$ ,  $\text{ἐ}\tilde{\iota}\pi\text{-o-}\nu$ ,  $\text{ἐ}\pi\text{-os}$  word, verse,  $\delta\psi$  (st.  $\acute{o}\pi$ ) voice,  $\text{ἐ}\nu\text{-o}\pi\text{-ή}$  a cry, noise.  
 Skt. rt.  $\text{vak}$  ( $\text{ví-vak-mi}$ ,  $\text{vak-mi}$ ) say, speak,  $\text{vák-as}$  word, song,  $\text{vāk}$  speech, voice,  $\text{vāk-ja-m}$  utterance, speech,  $\text{vak-ana-m}$  recitation. — Zd.  $\text{vac}$  (m.),  $\text{vac-añh}$  (n.) word.  
 Lat.  $\text{vox}$  (st.  $\text{vōc}$ ),  $\text{vōc-ā-re}$ ,  $\text{con-vīc-iu-m}$ ,  $\text{prae-(vi)c-o}$ .  
 OHG.  $\text{wah-an}$  (pret.  $\text{ga-wuog}$ ),  $\text{ga-wah-anjan}$  mention (Germ.  $\text{erwähnen}$ ),  $\text{gi-wah-t}$  mentio.  
 OPruss.  $\text{en-wak-ē-mai}$  invocamus, ChSl.  $\text{vyk-anije}$  clamor, Serv.  $\text{vik-a-ti}$  vociferari.  
 OIr.  $\text{iarma-foich}$  quaerit,  $\text{i-ar-fact}$  quaesivit,  $\text{i-ar-faigid}$  quaestio.

Bopp 'GL,' Pott W. iii. 268, Windisch 'Beitr.' viii. 444, Van. 858 ff. — Sonne 'Epilegomena' p. 59 and Ebel 'Ztschr.' ii. 46 discuss the agreement of the reduplicated aor. which is contracted from  $\text{ἐ-fe-f}\epsilon\pi\text{-o-}\nu$  with the Skt. form  $\text{a-vōk-a-m}$  which arose out of  $\text{a-va-vak-a-m}$ . — On the  $f$  in  $\text{F}\epsilon\iota\pi\eta\eta\upsilon$  (perhaps more correctly  $\text{F}\acute{\eta}\pi\eta\eta\upsilon$  Ahr. 460 'Aeol.' 90) and  $\text{F}\acute{\epsilon}\pi\text{os}$ , Ahr. 'Aeol.' 31, 171, 226, and  $\text{ῥῶσα}$ , in which there is nothing to preclude a  $F$ , Knös 82 ff. —  $\text{ἐ}\acute{\rho}\nu\text{-o}\pi\alpha$  as the 'far-resounding' (cp.  $\text{Κρονίδαν βαρυ-όπ-α-ν}$  Pind. 'Pyth.' vi. 24) is plausibly referred here by Döderlein 'GL.' 509, Goebel 'Ztschr. f. österr. G.' ix. 783. — The old guttural which was protected by the  $j$  is discernible in  $\text{ῥῶσα}$  for  $\text{ῥκ-ja}$ , which is a fem. corresponding to the Skt. neut.  $\text{vāk-ja-m}$  of like meaning, perhaps too in  $\text{Ἰ-ακχ-o-s}$  for  $\text{F}\iota\text{-Faxχ-o-s}$  by the side of  $\text{Bάκχ-o-s}$ , if the god is named from the shouts and cries uttered at his festivals. — Even after Corssen's objections ('Beitr.' 18, i<sup>2</sup>. 482) I think Fleckeisen is probably right in connecting the Lat.  $\text{in-vītare}$  and explaining it to be for  $\text{invic-i-tare}$ ,  $\text{invictare}$  ('Rhein. Mus.' viii. 221). Cp. note to No. 17 and Jahn's 'Jahrb.' 1865 p. 126. [But cp. Nettleship 'Journal of Philology' v. 20.] On the other hand Corssen p. 72, ii<sup>2</sup>. 360 makes it probable that  $\text{con-vīciū-m}$  and not, as Fl. assumed,  $\text{convitium}$  is the best authenticated spelling. In this case we must with C. assume a rt.  $\text{vec}$  as well as  $\text{voc}$  (cp.  $\text{votare}$  by

the side of *vetare*), and derive thence *con-vēc-iu-m*, like *con-lēg-ium*, and thence *convīcium* (cp. *delīnio* by the side of *lēnio*). From this form of the root again (i.e. *veo*) we must derive the above-mentioned \**invicitare* to which *invitare* was referred. — According to Stokes 'Rem.' p. 39 another word which belongs here is *duacthar* 'loquitur' 'ML.' 51<sup>c</sup>, for *du-facthar* (?). — There is no connexion whatever with the rt. *σε* (No. 6 2).

621. Root *ἐπ* (for *σεν*) — *ἐπ-ω* (*ἀμφι* — *ἐφ* — *μεθ* — *δι*),  
aor. *ἐ-σπ-ο-ν* am busied about something, *ἐπ-ο-μαι*  
follow, aor. *ἐ-σπ-ό-μην*, *ἐπ-έ-τη-ς* attendant, *ἐπ-λο-ν* implement.

Skt. rt. *saḥ* (*sāḥ-a-tē*, *sī-shak-ti*) be together, follow,  
*sap* (*sāp-ā-mi*) fasten to, concern oneself about,  
strive after, *saḥ-i-va-s* companion.

Lat. *sequo-r*, *sec-u-ndu-s*, *ad-sec-la*, *sec-to-r*, *pedis-sequa*, *soc-iu-s*.

Lith. *sek-ù* (inf. *sék-ti*) follow, come after.

OIr. *do-seich* sequitur, subj. dep. *airesechethar* ut sequatur, *sechem* secutio, sequi, *sochuide* societas, copia.

Bopp 'Gl.' s. v. *saḥ* and *sap*, Benf. i. 430, ii. 356, Pott W. iii. 304. — On the developement of the meaning in Skt. Grassmann 'Lex.' under *saḥ*. Cp. Delbrück 'Abl. Loc. Instr.' p. 55. For Greek the relation of the meanings of *ἐφίπω* and *ἐπομαι* is instructive. *ἐπομαι* has originally, and in Homer exclusively, the meaning 'accompany,' whence *ἀμ' ἐπεισθαι*, not 'come afterwards,' and this confutes the attempt to explain *ἐπονται* A 424 by 'will follow,' and also Buttmann's explanation of *δπλότερος* as 'the younger' ('Lexil.' ii. 126). On the other hand the primary meaning justifies the comparison of *ἐπ-λο-ν* which originally meant not 'weapon' but 'implement' and can hardly have anything to do with the Goth. *vērma* (n. plur.), OHG. *wāfan*. — The Lith. *sek-ù* has moreover this special point of resemblance with the Lat. *sequor* that it also takes the acc. (Schleicher 'Lit. Gr.' p. 262). The same construction is given for the Skt. *saḥ* and *sap*. In the earlier writers *ἐπομαι* takes the acc. perhaps only in Pind. 'Nem.' x. 37, and there with a special meaning. — Just as the original *σ* is still retained in *ἐ-σπ-ο-ν* *ἐ-σπ-ό-μην* ('Gk. Verb' p. 294), so perhaps the Hom. *ἀ-οσση-τήρ* 'helper' may be regarded as one of those forms which preserve the effect of the original *κ* in the *σσ*. 461 In that case it would stand for *ἀ-σοκή-τηρ*. Hesych. gives the by-forms *ἰοσσητήρ*, *δοσσητήρ* = *βοηθός*, *ἐπικούρος*. — Windisch in Kuhn's 'Beitr.'



viii. 25 distinctly denies that in Skt. *p* arose from *k*, so that we must assume *sak* and *sap* to be 'a pair of roots with different determinatives.'  
 — The Ir. *saigim* 'adeo' connected with this root by Ebel 'Beitr.' ii. 165 and the Goth. *sôkja* must alike be separated from this root.

622. ἥπαρ. — Skt. *jakrt* (n.) — Lat. *jecur*. — Lett. *ak-ni-s* liver.

Bopp 'Gl.,' Pott i<sup>1</sup>. 113. — The *k* which is attested by three languages is represented by a *π* only in Greek. I take ἥπαρ = *jakart* as the Gk. stem, and assume that ἥπαρ the primary form of the remaining cases has lost a *ρ*, just like *pori* for *pori*. Cp. No. 626. The root is to be found in the syllable *jak*. Hence with a different suffix is formed the Skt. *jak-an*, the basis of the oblique cases. In the Lat. *jec-in-or-is* we get the *n*- and *r*- suffixes combined, while the Lett. form shows only *n*. — For an answer to Kuhn's explanation ('Ztschr.' i. 379, ii. 141 ff.), which is different, see Sonne 'Ztschr.' xii. 294, and Fick. i<sup>1</sup>. 729.

623. Root in ἥπαρ-το-μαί hurt, ἥψ (st. ἥπ) a noxious worm, ἥπ-ο-ς a wooden bat (in a mouse-trap), fuller's press.

Lat. *ic-o*, *ic-tu-s*.

Sonne 'Epilegomena' 51 ff. — Hesych. gives the active forms ἥψαι, ἥψας. From among many doubtful conjectures we may select as almost certain that of the original identity of ἥξ and ἥψ (the name of noxious worms), of which the former would thus be the older of the two. Probably too ἥπ-νη 'woodpecker' is related, so that the primary meaning of the root is 'hit.' Van. 82 connects also ἥκ-τί-νο-ς 'falcon,' which would furnish another instance of the original *κ*, as does possibly ἥκ-ρι-α 'boarding,' 'scaffolding,' 'deck,' the proper names ἥκ-αρο-ς, ἥκ-μάλι-ος (τέκτων τ 57), ἥκταρ 'near,' cp. p. 115, and finally the Cyprian ἥκαμένος 'wounded' ('Tablet of Idalion' l. 4), according to Ahrens's probable explanation ('Philol.' xxxv. 36). Since ἥπ-ο-ς meant on the one hand 'wooden bat,' 'mousetrap,' on the other τὸ τῶν κναφέων ἐργαλεῖον (Pollux vii. 41) it comes in very well here. Derived from the latter meaning again, as Pollux rightly remarked, is ἥποισθαι = ἀποθλίβεσθαι, πιέζεσθαι. It is possible too that ἥν-ίσσω = ἥν-ικ-ῶ (by-form ἥνιπτω) along with ἥν-ἥπ-απ-ο-ν, ἥν-ἥν-ἥπ-ο-ν (cp. ἥν-ἥπ-ῆ) belongs here; it would thus properly mean 'drive at,' 'hit at' (cp. ἐπιπλήσσειν, ἐμπλήσειν). To explain ἥπ-απ-ο-ν however we must assume ἥπ as a by-form to ἥπ ('Gk. Verb' p. 292). — Savelsberg 'De Digammo' p. 46 agrees with the 'E. M.' in connecting the name of the river Ἐνιπέυς with this verb, but he takes the verb quite differently, and is

perhaps right in holding the Scholiast's reading in Pind. 'Ol.' xi. 72 'Ενικεύς (var. lect. Νικεύς) to be the older one, connecting it with ἐνίσσω, especially as 'Ενισεύς is also found. — I cannot agree with Fick 'Bezzenb. Beitr.' i. 59 in holding that this rt. *ik* has any connexion with the Skt. *aç* (No. 2), a supposition that would oblige us to separate it entirely from the rt. *ip*. Cp. the note on No. 24 b.

624. ἵππο-*s* horse, ἵππότα horseman, ἵππ-ιο-*s* pertaining to horses. — Skt. *áçva-s* (Zend. *açpδ*) horse, *açva-* 462 *tará-s* mule, *áçvja-s* = ἵππιο-*s* (Zend. *açpya*). — Lat. *equu-s*, *equa*, *equē(t)-s*, *equitare*. — OSax. *ēhu* horse. — Lith. *asvā* mare, *aszu-ta-ī* horse-hair. — OIr. *ech* equus, *echai e* mulio, *Epo-rêdia*, Cymr. *ep*, *eb* equus.

Bopp 'Gl.' Joh. Schmidt 'Rt. AK' p. 45, Pott W. i. 525, Ebel 'Beitr.' ii. 161, Stokes 'Ir. Gl.' 17. Cp. above p. 457. — The Greeks have preserved the special feminine form only in the proper name 'Ἰππη-μολγοί. The guttural form ἱκκο-*s* is attested by 'E. M.' p. 474, 12 (ἱκκος σημαίνει τὸν ἵππον) and by the proper name ἱκκος (Tarentum, Epidaurus). The spir. lenis is preserved in the proper names Λεύκ-ιππο-*s*, Ἀλλκ-ιππο-*s*, Νίκ-ιππος, Ἀρίστ-ιππο-*s*, Κράτ-ιππο-*s*, etc. (Pott W. i. 533), in the Lesb. ἵππιος (Ahr. 'Aeol.' 29), in the Siceliote ἱπ-νή = ἱφιππίς (Hesych.) i.e. ἱππ-νή *equina*, sc. 'pellis,' 'vestis.' In this, as in many other cases to be discussed below, the spir. asper took its place in the course of time. The proper name ἱππυ-*s* (of Rhegium) is remarkable. — On the *i* by the side of the Lat. *e*, Skt. *a*, cp. below p. 712. Pott ii<sup>1</sup>. 260 also connects Ἐπ-εύς the name of the constructor of the Trojan horse, but this is doubtful. — Italian forms with the *p* are *Ep-ōna* ('Juvenal' viii. 157) 'goddess of horses and asses' (Preller 'Röm. Myth.' 594), perhaps the Campanian *Epidiu-s* (Mommsen 'Unterital. D.' 258, cp. Corssen 'Ital. Sprachk.' 126 ff.). — The Indo-Germanic primary form *açva* is, according to Jac. Grimm's conjecture ('Üb das Verbrennen der Leichen' p. 18) preserved in the Goth. *aīhva-tundi* 'thorn-bush' more accurately than in the OS. *ēhu*. The root is probably *aç* (No. 2). — The Gallic *Eporedia* (the name of a town), 'eporedias Galli bonos equorum domitores vocant' (Plin. 'H. Nat.' iii. 17 (24)), Glück 'Kelt. Namen' p. 144; with *eporêdias* (-os?) cp. Cymr. *eb-rydd* 'quick' (*ryydd* = OIr. *riad* 'cursus,' OGall. *rêda* 'currus').

625 Root λιπ λείπ-ω λι-μ-π-άν-ω leave, abandon, λείμ-μω λείψανο-ν remnant, λοιπ-ός left.

Skt. rt. *rik* (*riṇḍk-mi*) to clear off, empty, evacu



*rik-ta-s* or *rik-tá-s* empty, clear of something.

Zd. *ric* forsake.

Lat. *lingu-o*, *re-lingu-o*, *re-liqu-u-s*, *lic-e-t*, Osk. *lik-i-tud* = *lice-to*, Lat. *lic-e-o-r*.

Goth. *leihv-an* δανείζειν, lend.

Lith. *lėk-ù*, Inf. *lėk-ti* remain, leave, *lėka-s* left over, *palaiki-s* what is left over.

OIr. *lécim* I leave, let loose, *ro-léiced* concessum est, *dollécim* I throw.

Bopp 'Gl.,' Benf. ii. 11, Ebel 'Beitr.' ii. 157. — The primary meaning, 'leave,' 'leave free,' i.e. 'unoccupied,' is evident throughout. *licet* ('it is left to one,' 'open to one,' cp. καταλείπεται, ὑπολείπεται) is the intransitive to *linguere*, and is related to it as *pendet* is to *pendere*, *jacet* to *jacere*, *candel* to *accendere*. For the meaning we may also compare ἔξεστι, ἐκπέλει. *licet* in the meaning 'it is for sale' (cp. the Engl. *to let*) leads to *liceri* 'to bargain,' 'bid,' 'give oneself up to one another,' from which we arrive at *pol-lic-eor*, the first part of which compound has been discussed on p. 285. Cp. Corssen i<sup>2</sup>. 500 f.

463 Fick i<sup>3</sup>. 753 is perhaps right in placing none of the Teutonic words here but those with an *h* (from *k*), e.g. the German *leihen*, *verleihen* in the sense of 'abandon,' 'give over,' while he gives those with *f* and *b* under the rt. *lip* (No. 340). So Pott W. iii. 225. — Perhaps λίσσωμεν ἑάσωμεν (Hesych.) contains traces of a Greek λικ; it would then be for λικ-ῶμεν, but it is not in its right place alphabetically and is therefore a suspicious word. Otherwise M. Schmidt s. v., though he states a different view again 'Rhein. Mus.' xviii. 630. — The Lat. *liqu-ēre* too and *liqui* along with *liqu-or*, *liqu-idu-s* may be annexed to this root, since the Germ. *lassen* ('leave,' 'let') and *zerlassen* are used in the sense of 'let flow,' 'liquefy,' and there is a Zend. rt. *ric* 'pour out,' which Justi is perhaps right in identifying with *ric* 'give over' (cp. Corssen i<sup>2</sup>. 502).

626. Root μαρπ μαπ μάρπ-τω grasp (aor. ἔ-μαπ-ο-ν, μέ-μαπ-ο-ν Hesiod), μάρπ-τι-s robber.

Skt. rt. *març* lay hold of, in comp. seize, grasp, comprehend, *març-ana-m* a touching (?).

Lat. *mulc-ēre*, *mulc-āre*.

This comparison rests on the identity, recognized by Lobeck 'Rhemat.' 48 between βράξαι συλλαβεῖν (Hesych.) and μάρψαι συλλαβεῖν, to which may be added βρακεῖν συνιέναι ('comprehend'), δυσβράκανον δυσχερές, δύσληπτον, δυσκατανόητον. — To the forms with *κ* seem to belong the proper names Μάρμακος, Μάρμαξ, and perhaps ἀ-μ-β-λακ-εῖν



or  $\acute{\alpha}$ - $\mu$ - $\pi$ - $\lambda$ ακ-εῖν 'not to grasp,' and so 'miss,' 'fail,' and to the forms with  $\pi$  *Μαρψίας*, *Μάρπησσα*, perhaps too *βράπτειν* 'εἰσθλεῖν', *κρύπτειν*, *ἀφανίζειν*, τῷ στόματι ἔλκειν Hesych. Fick ('Ztschr.' xx. 172) takes μέροψ too to be 'grasper' and 'comprehender,' μορφ-ή with aspiration of the  $\pi$  as 'fashion' (Germ. *Fassung* from *fassen* 'to seize'). — The identification of the rt. *μαρπ* with the Skt. *marṣ*, advocated by Roth 'Ztschr.' xix. 222, though the meaning is entirely in its favour, has this against it phonetically, that *marṣ* points to  $\xi$ , but *μαρπ* to the other  $\kappa$ , which has a tendency to become labialized. Fick i<sup>2</sup>. 720 assumes that the  $\pi$  of *μαρπ* arose from  $\kappa$  owing to the assimilating influence of the initial  $\mu$ , but this is unlikely. Perhaps *mark*, and *marḥ* were two separate expansions of the rt. *mar*, with different determinatives. Cp. note on No. 481.

627. Root ὀπ see ( $\delta\pi$ -ωπ-α,  $\delta\psi$ ομαι),  $\delta\mu$ -μα (Lesb.  $\delta\pi$ -πα), look, eye, ὄψ (st. ὦπ),  $\delta\psi$ i-s sight, face, ὀπ-τήρ spy, ὀπ-ῖπ-εὔειν ogle, make eyes, ὀπ-ή (peep-hole) hole,  $\delta\pi$ -εας awl, ὀφ-θ-αλμός-s eye.

Skt. *ak-sh-á-m*, *ak-sh-án*, *ák-sh-i* eye, st. *ík-sh* see, look, *íksh-a-na-m* look, eye. Zd. *akhsh* see, *ashí* eye.

Lat. *oc-ulu-s*.

Goth. *aug-ô* ὀφ-θαλμός, *aug-jan* show.

Lith. (*at*) *ank-ù* inf. *ák-ti* to have one's eyes opened, *ak-ù-s* eye, *ák-a-s* a hole in ice; ChSl. *ok-o* eye, *ok-no* fenestra.

OIr. *aged* face, *in-agid* adversus; *ainech*, *enech*, Cymr. *Arem. enep* facies, Corn. *eneb* pagina, *Arem. aenep* adversus.

Bopp 'Gl.' Pott W. ii. 2, 302, Diefenbach 'Vgl. Wörterb.' i. 53, Grimm 'Deutsches Wörterb.' i. 789, Schleicher 'Ksl.' 97. — For a discussion of the meaning see p. 101; it may be added that in this respect the aor. ἐπώψατο 'conspexit' (Pind. fr. 58 Bergk) and ἐπιώψομαι (β 294), 'I will look out,' 'select' (with the aor. ἐπώψατο) are characteristic. — The original  $\kappa$  occurs in the Boeot.  $\delta\kappa$ -τ-αλλο-ς ὀφθαλμός and in  $\delta\kappa\kappa$ ο-ν ὀφθαλμόν Hesych., on the formation of which words see Ludw. Schwabe 'De deminutivis Graecis et Latinis' p. 84; it is beneath the surface in  $\delta\sigma\sigma\epsilon$  (neut.) =  $\delta\kappa$ i-ε, where the sibilant finds its correlative in the ChSl. *oči* the dual of *oko*. The st.  $\delta\kappa$ i corresponds completely to the Lith. *aki*. It is again traceable in  $\delta\sigma\sigma\omicron$ μαι =  $\delta\kappa$ -jō-μαι, 'look,' perhaps too in ὄσσα. Cp. I. Bekker 'Monatsber.' 1864, 12. In the form ὀττι-s too, which occurs in τρι-οττί-s (Arcadius p. 35, 12) properly 'three-eyes,' but used only of a neck-ornament

with three holes, with the by-form *τριπίς* preserved by Hesych. (*περιτραχήλιον τρεῖς ἔχον ὀφθαλμοὺς ὑαλοῦς*), the *ττ* must owe its existence to the older *κ*. — Among the forms with *π* we may notice specially *ὀπ-ίπ-α-ς* and *ὀπ-ίπ-εύω* (corrupted into *ὀπ-ιπ-τεύω*) as reduplicated forms (cp. *ὀνίνη-μι* and *ἦν-ίπ-απ-ο-ν* No. 623, in which latter case the order of the syllables is transposed). For *ὀφ-θ-αλ-μός* two natural explanations suggest themselves as opposed to attempts such as those of Pott ii<sup>2</sup>. 413, 590, 781 (rt. *θαλ* 'the bloom of the face'), in which he owns to some hesitation: either that it is from a root (cp. p. 62 ff.) with an affixed *θ* (cp. *έσ-θ-ή(τ)-ς*), when the multiplicity of suffixes might perhaps be explained by the assumption of a verb *ὀφθαλλω* as middle step which had perhaps the meaning 'eye,' 'ogle,' or that it came by aspiration from *ὀπταλ-μο-ς* (Roscher 'Stud.' i. 2, 105), in which case we should have to assume a verb *ὀπταλλω* coming near to the Boeot. *ὀκ-τ-αλλο-ς*. — Ebel ('Ztschr.' viii. 242) and Grassmann (ix. 23) explain the diphthong of the Teutonic word by assuming metathesis — with the assumed *ah-va* we might compare the Gk. *ὀκ-φο* later *ὀκ-κο*, — Lottner (ix. 319) otherwise. Fick i<sup>1</sup>. 4 connects also the Goth. *aħa noūs*, *aħjan νομίζειν*, to which belongs the Germ. *achten* 'consider.' The diphthong (in the Goth. *augθ*) is explained by Möller 'Ztschr.' xxiv. 436 by the epenthesis of the *u* which was originally sounded after the *g* (*agu-an*), i. e. by the same element which produced labialism in Greek. — *δράκ-ων* (No. 13) makes it seem probable that *ὄφι-ς* 'serpent' belongs to this root (cp. Hesych. *πρό-ωφ-ο-ς* *πρόσκοπος*), its trochaic scansion in *αἰόλος ὄφης* in Hom. and Hipponax fr. 49, 6 points perhaps to *\*ὀκ-φι-ς* (cp. p. 505); *ὄπις* (by-form *ὀπέυς*) is no doubt rightly explained by Joh. Schmidt ('Die W. AK' p. 27) to be the 'maker of holes' (*ὀπάς*). — In this essay (cp. Tobler 'Ztschr. für Völkerpsych.' i. 366) the rt. *ὀκ, ὀπ* is identified with the rt. *ακ* (No. 2), to be sharp, in which case the eye would have got its name from its keenness. But we can now see that this explanation is inadmissible owing to the difference between the two *k*'s: 'to be sharp,' 'to penetrate' is *ακ*, 'to see' is *ακ*. — On the Keltic words cp. Windisch 'Beitr.' viii. 45; they remind us forcibly on one side of the Gk. *ένωπῆ, ένώπια, ένώπιον*, and on the other of the Skt. *ánika* 'face,' 'front.'

628. This number I now omit, because, after the investigations of Fick i<sup>1</sup>. 16, 801 and Pott W. v. 205 on the subject of *ὀπό-ς* and *σῦου-ς*, I doubt whether these words are identical. On *ὀπό-ς, σοφό-ς, σήπειν, sapere*, cp. below p. 512.

629. *πέντε* (*πεντά-πολι-ς, πεντά-δραχμο-ς*) Aeol. *πέμπτε, πέμπ-το-ς*. — Skt. *pañkan*. Zd. *pañcan*, Ved.

*pañka-thá-s*, Zd. *pukh-dha* = *πέμπ-το-s*. — Lat. *quinque*, *quin(c)-tu-s*, *Quinct-ili-s*. — Goth. *fmf*. — Lith. *penkš*, ord. *pėnk-ta-s*, ChSl. *pę-tŭ*, ord. *pętyj*. — OIr. *cóic*, ord. *cóiced*, Cymr. *pimp*, ord. *pimphet*.

Bopp 'Vgl. Gr.' ii. 71, Schleicher 'Comp.' 399, 407, Windisch 'Beitr.' viii. 22. — For the Samnite *Πόμπτιος*, *Pontius* = *Quintius*, to which also *Pomp-ēju-s* no doubt belongs (cp. *Petr-ēju-s*; *petora* 'four'), 465 see Mommsen 'Unterit. D.' 289. — The *π* in *πεμπάειν* (Homer, Aesch.) is remarkable, as also in *πεμπάς* (Attic) and *πεμπτός*. For the latter cp. Havet. 'Mém.' ii. 265. — It remains a question whether we are to assume with Schleicher a primary form *kankan*, from which *πέμπτε* would have arisen by a double labialism, or a primary form *pankan*, which would have been preserved most accurately in Lithuanian, while in the Lat. *quinque* the initial letter would have been assimilated to that in the middle of the word. It is argued against Schleicher by Friedr. Müller 'Beitr.' ii. 397 that reduplication appears unsuitable in a word for an odd number. The latter view is supported by Pott 'Beiträge' ii. 55, 'E. F.' i. 142, perhaps rightly. We have a certain instance of such assimilation in *Boblicola*, which is adduced by Bergk 'Ztschr. f. Alterthumsw.' 1856, p. 132, and a similar one in *bi-bo* compared with the Skt. *pí-bā-mi* (No. 371). Benfey 'Or. und Occ.' i. 573 collects other similar instances, though many are doubtful. Cp. No. 630. If we start with *pankan* as the primary form we may perhaps derive it from the rt. *pak*, which occurs in No. 384 as *puk*, in which case the number five would have been named from the closed hand.

630. Root *πεπ* *πέπ-ων* ripe, *πεπ-τός* cooked, *πέψι-s* digestion, late present *πέπ-τω* cook, *πέμ-μα* pastry, *πέπ-αγο-ν* sacrificial cake.

Skt. *paṭ* (*pák-ā-mi*) cook, bake, ripen, *pāk-ā-s* cooking, ripening, *pak-vá-s* done (of meat), ripe, *pak-tí-s* cooking, digestion. Zd. *pac* cook.

Lat. *coqu-o*, *coquo-s*, *coqu-īna*, *cŭ-līna*.

ChSl. *pek-g* coquo, *peš-tŭ* fornax, Lith. *kep-ù* bake, *kep-ėje* bakeress.

Corn. *peber* pistor, *popei* pistrinum, Cymr. *popuryes* pistrinx, *poeth* hot; OIr. *cucann* pistrinum.

Bopp 'Gl.', Pott W. iii. 173, Benf. ii. 88, Schleicher 'Ksl.' 88, Ebel 'Beitr.' ii. 143, Windisch 'Beitr.' viii. 22, Stokes ibid. 346. — We are here met by the same doubt that met us under No. 629,



whether we are to take *kak* or *pak* to be the original root. In this case too it is only Latin that has a double guttural throughout, and it is to be noticed by the way that good MSS. of Plautus and Vergil have more frequently *quoquo* and the like (Soph. Bugge 'Tidskr. f. Philol.' 1866 p. 36, cp. Corssen i<sup>2</sup>. 69). Perhaps we should connect *κακκ-άβη* 'pot,' 'pan,' where *κκ* may be explained to be from *κφ*. A similar suffix occurs in *κάνν-αβο-ς*, *κόν-αβο-ς*, *κόττ-αβο-ς*, *ἑκ-άβη*. Or is the word onomatopoetic like *ῥτροβο-ς*, *ῥραβο-ς*? The Skt. and Slav. forms point plainly to the form *pak*, as does the older present *πέσσω* = *πεκῶ*. In Lithuanian its place is taken by *kap*, which meets us also however in the Gk. *ἄτρο-κόπο-ς* 'bread-baker,' which cannot be separated from this root (Lobeck 'ad Phryn.' p. 222). Pott's attempt ii<sup>2</sup>. 781 again to make a 'bread-hewer' (rt. *κοπ*) out of *ἄτροκόπος* is a complete failure, and no help at all is to be got from *χονδροκοπέιον* 'a cornmill.' With the Greeks themselves *ἄτροκόπος* was equivalent to *ἄτροπόπος*, and *ἄτρον πέσσειν* is the technical expression for 'bread-baking.' Fick i<sup>2</sup>. 519 assumes for these words a special rt. *kap*. Cp. 466 however *σέπ-τομαι* and *spec-io* (No. 111). Lastly we have the double labial in *pap*, Gk. *πεπ*, whence too comes the probably Oscan *pop-ina* as correlative to the common-Latin *coqu-ina*. With this form we may perhaps connect *ῥψ-ω* for *πεψ-ω*, with an added *σ* (cp. *ῥπτα-μαι* for *πιπτα-μαι*) along with *ῥψ-ο-ν*, *ῥπ-τό-ς* for *ποπ-το-ς* and thence *ῥπ-τάω* 'roast.' For the transformation of the initial see p. 709. — For the meaning 'ripe' we may compare Cic. 'Cato' xix. § 71 'matura et cocta.' Starting from this point we arrive at the meaning 'soft' and in this way *πέπον* was used by way of endearment and abuse too. The notion 'ripe' in the special sense of 'ripe for death' is assumed by Osthoff ('Ztschr.' xxiii. 428) to account also for the OHG. *feigi*, which took later another shade of meaning, i.e. that of 'faint-hearted.' — Mommsen's assertion, that even to the Graeco-Italians 'baking' was as yet unknown ('Hist. of Rome' vol. i. p. 20), is rendered doubtful by this root. — The OHG. *bahhan* however belongs to No. 164.

631. Interrogative stem *πο* (New-Ion. *κο*) *πό-θι*, *ποῦ* where? *πό-θεν* whence? *πῶς* how? *πό-τε* when? *πό-τερο-ς* which of two? *πό-στο-ς* where in order? *πο-ῖο-ς* qualis? *πό-σο-ς* quantus?

Skt. *ka-s*, Zd. n. s. *kô* (fem. *kā*, n. *ka-t*) who? *kva*, Ved. *kú-ha* where? *kú-tas* whence? *ka-thá* how? *ka-dá* when? *ka-ta-rá-s* (Zd. *ka-tā-ra*) which of two? *ka-tamá-s* which out of many? *ká-ti* how much? Zd. *cvañt* quantus?

Lat. *quo-d*, *quō*, *u-bi* (for *quo-bi*) = Umbr. *pu-fe*,

*qua-m, quan-do, u-ter* (for *quo-tero-s*), *uter-que* =  
Osc. *pū-tūru-s-pīd*, Umbr. *pu-tre-s-pe, quo-t, quo-*  
*tu-s, qua-ntu-s* (Umbr. n. s. fem. *panta*), *quā-li-s*.

Goth. *hva-s* (fem. *hvó*, n. *hva*) who? *hvan* when?  
*hva-r*, OHG. *hwár, wá* where? Goth. *hva-th*  
whither? *hva-thar*, OHG. *hwēdar* which of  
two?

Lith. *kà-s* (m. and n.) who? *kù-r* where? *ka-dà*  
when? *ka-í* how? *ka-trà-s* which of two? —  
ChSl. *kǎ-to* quis? *ky-j* (neut. *koje*) qualis? *ko-*  
*torij* qui.

OIr. *ca-te, co-te* quid est? *can unde?* *cach, cech*  
(adj.), *cách* (subst.) quivis, *cechtar* uterque; Cymr.  
*pa* qui? *pop* (adj.), *paup* (subst.) quivis.

Bopp 'Vgl. Gr.' ii. 203, Aufrecht 'Umbr. Denkm.' ii. 37, Mommsen  
'Unterit. Dial.' 290, Diefenbach 'Vgl. Wtb.' ii. 594, Schleicher 'Lit.  
Gr.' 195. — The treatment of this stem in the above works leaves  
nothing to be said about the several forms. In all languages we find  
the indefinite use side by side with the interrogative. The *κ* survives  
not only in the New-Ionic forms *κοῦ, κόθεν, κῶς, κότε, κοῖος, κόσος, κό-*  
*τερο-s* but also in the ordinary Greek *ἐ-καστο-s* with the comp. *ἐ-κά-*  
*τερο-s*, for it is unmistakeable that *κα-στο-s* is identical with *πο-στο-s*,  
and *κα-τερο-s* with *πο-τερο-s*. Since the initial *ϕ*, of which Homer too  
gives traces, is attested by the four times repeated *φέκαστος* on the  
lately discovered Locrian inscription from Naupactus, the most  
natural account of the syllable *ϕε-* is that it is derived from the re-  
flexive stem (No. 601, Allen 'Stud.' iii. 248 ff., cp. Leo Meyer 'Ztschr.'  
xxi. 350 ff.). Fick i<sup>3</sup>. 33 is probably right in referring *πό-σ-το-s* to  
*\*ποτι-το-s* (*\*ποτι* = Lat. *quo-t(i)*), while the Lat. *quo-tu-s* came from the 467  
unexpanded stem. It may be left to others to decide how it was that  
the *κ* and the *α* were preserved in *ἐκαστος*. — A trace of the labial  
spirant is to be seen in the doubling of the *π* in the poetical and  
Aeolic *ὀππως, ὀπποτε*, etc., where the *ππ* has arisen by assimilation from  
*πϕ* and this from *κϕ*, and consequently corresponds completely to the  
*ππ* in *ἵππος* discussed above. — In many languages the indefinite use  
gives rise to the general meaning 'all,' 'every,' which is to be seen  
e.g. in the Lith. *kà-s* by the side of the interrogative meaning, and  
which is introduced in the Italian languages by the addition of *-que*  
(cp. No. 647) which also belongs here, Osc. *-pīd*, Umbr. *-pe, -pei* (*uter-*  
*que, quis-que*), though in *quoti-die*, and *quot-annis* we find the same  
meaning without such an addition. Hence we may with certainty



follow Schmidt ('De pron. Graeco et Latino' p. 61) and Pott W. i. 828 in connecting the rt. *παντ* (n. *πᾶ-s*) which, formed with the suffix *-vant*, is to be referred to a presumable *\*kā-vant* 'how much?' 'how great?' analogous to the Skt. *tā-vant*, 'so much,' 'so great.' (Zd. *cvañt*, Lat. *quant-u-s*, Umbr. *pant-a*; Bopp 'Vgl. Gr.' ii. 229). It cannot be urged against this view that the Ionians did not, as we might expect, say *\*kā-s* nor the other Greeks *\*ē-pasto-s*, as the dialects show an unmistakeable variation in the treatment of these sounds. The adv. *πάμ-παν* is most likely nothing but the reduplicated neuter; *πάν-υ* seems to be a compound—perhaps the *υ* is the same *u* that is added in Skt. to different pronouns (e. g. *kim-u* 'what indeed?') and has left other traces in other languages (Sonne 'Ztschr.' xii. 269).

632. Root *cen* say, Hom. *ἐ-σπ-ε-τε* say, *ἐνι-σπ-ε-ν* said, *ἐνν-επ-ε*, *ἐνί-σπε-s*, *ἐνί-σπε*, *ἐν-έπ-ω* say, tell (fut. *ἐνι-σπή-σω*).

OLat. *in-sec-e* = *ἐννεπε*, *insectiones* = *narrationes*, *insexit* *dixerit* (Paul. Ep. 111).

OHG. *seg-jan*, *sag-ē-n* say.

Lith. *sak-aú*, inf. *sak-ý-ti* say, *į-sak-aú* tell to, *pá-sak-a* narration. — ChSl. *sok-ŭ* *κατήγορος*, *soč-iti* indicare.

OCymr. *hep* inquit; OIr. *insce* sermo (for *in-sece*); *aithesc*, Cymr. *atep* responsum (for *ati-sec*); OIr. *cosc*, Cymr. *cosp* set to rights, punish (for *con-sec*); OIr. *in-cho-sig* significat.

Ebel 'Ztschr.' ii. 47 (cp. 'Beitr.' ii. 165) has rightly separated the Greek words from *ειπεῖν*, *ἔπος* (No. 620) which have an initial *f*. This root has nothing whatever to do either with the rt. *fεπ*, to which belongs *ἐν-σπή*, and which has quite a distinct meaning, or with *ἐνίσσω* (No. 623). *ἐ-σπ-ε-τε* is either a reduplicated aor. for *σε-σπ-ε-τε* (cp. *ἐ-σπ-ό-μην* No. 621) or else has come from *ἐν-σπε-τε* (Van. 995). *ἐνί-σπε-s* is formed like *σχ-ί-s* rt. *σεχ* (No. 169), *ἐνί-σπ-ε* on the analogy of the thematic conjugation. *ἐννεπε* comes by progressive assimilation from *ἐν-σπε* like the Aeol. *ἔ-τεν-να* = *έ-τεν-σα*, the fut. *ἐν-ίψω* like *ἴσθι* 'be' with softening of *ε* to *ι*. — I find traces of the *κ* in the Homeric *ἴσκειν* which *χ* 31 most unmistakeably means 'said' (Död. 'Gl.' 287), and which I take to be an imperf. like *ἴσ-χ-ε-ν* with *ι* as a reduplication (*σι-σεκ-ε-ν*), and also in *θέ-σκε-λο-s* = *θίς-φα-το-s*. — On the Italian 468 forms cp. Gellius xviii. 9, who quotes 'insecendo = dicendo' from Cato, and *insece* from Ennius and Livius Andronicus, and adduces *insectiones*, Plac. 'Gl.' *insequis*, 'narras, refers sed interdum pergis.'



The MSS. Plaut. 'Mil.' iv. 6, 5 (or 1220 R.) have *secuta est* = *locuta est*, but Sophus Bugge 'Tidskrift f. Philol.' 1866 p. 18 gives weighty reason for regarding it as an error. Corssen ('Ital. Sprachk.' 70) holds the spelling with the *qu* (also *sequius*, 'sermo' Loewe 'Prodr.' 420) to be mistaken, and to have originated in the idea that it was somehow connected with *sequi*. The Umbr. *pru-sik-u-rent* in the sense of 'declaraverint' is deduced by Aufr. and Kirchh. 'Umbr. Sprachdenkm.' ii. 331. (Cp. Bréal 'Tables Engubines' p. 248.)—To the forms with  $\pi$   $\pi\rho\acute{o}\sigma$ - $\epsilon\psi$ - $\iota$ - $\varsigma$  *προσαγόρευσις* Hesych. certainly belongs, probably  $\theta\acute{\epsilon}$ - $\sigma\pi$ - $\iota$ - $\varsigma$ ,  $\theta\epsilon$ - $\sigma\pi\acute{\epsilon}$ - $\sigma\iota\omega$ - $\varsigma$ .—On the Keltic words cp. Windisch 'Beitr.' viii. 46, Stokes *ibid.* 347. OIr. *saigid* 'disputare' reminds us on the other hand of the Goth. *sakan* 'strive.'

633. Root  $\tau\rho\epsilon\pi$ ,  $\tau\rho\acute{\epsilon}\pi$ - $\omega$  (Ion.  $\tau\rho\acute{\alpha}\pi$ - $\omega$ ) turn,  $\tau\rho\sigma\pi$ - $\eta$  a turning round,  $\tau\rho\acute{o}\pi$ - $\omicron$ - $\varsigma$  a turn,  $\tau\rho\acute{o}\pi$ - $\iota$ - $\varsigma$  keel,  $\tau\rho\acute{o}\pi$ - $\eta\lambda$ - $\iota$ - $\varsigma$  bundle,  $\tau\rho\sigma\pi$ - $\epsilon\iota\omicron$ - $\nu$  a press,  $\tau\rho\alpha\pi$ - $\acute{\epsilon}$ - $\omega$  tread grapes,  $\epsilon\upsilon$ - $\tau\rho\acute{\alpha}\pi$ - $\epsilon\lambda\omicron$ - $\varsigma$  versatile, clever.

Lat. *torqu-eo*, *tor(c)-mentu-m*, *torc-ulu-m*, *torc-ular* press, *torques* chain, bolt.

Pott W. iii. 155. Jac. Grimm 'Gesch.' 403 compares also the Goth. *threih-an*  $\theta\lambda\acute{\iota}\beta\epsilon\omega$ , OHG. *drā-j-an*, which Pott W. iii. 164 puts under another root, Benf. i. 673, Van. 297.—The *k* is preserved in  $\acute{\alpha}$ - $\tau\rho\alpha\kappa$ - $\tau\omicron$ - $\varsigma$  'spindle'—where  $\acute{\alpha}$  probably comes from  $\acute{\alpha}\mu\phi$  as in  $\acute{\alpha}$ - $\beta\omicron\lambda\omicron$ - $\varsigma$  'cloak'—of the same meaning as the Skt. *tark-ū-s*, and probably in  $\acute{\alpha}$ - $\tau\rho\epsilon\kappa$ - $\eta\varsigma$ ,  $\acute{\alpha}$ - $\tau\rho\epsilon\kappa$ - $\acute{\epsilon}$ - $\omega\varsigma$  (on the analogy of which Lycophron formed  $\nu\eta$ - $\tau\rho\epsilon\kappa$ - $\acute{\epsilon}$ - $\omega\varsigma$ ), for which the Etymologica give a Doric by-form  $\acute{\alpha}\tau\rho\epsilon\chi\eta\varsigma$ . With Döderlein 'Gl.' 655, 2467 I take the word to mean 'not turned' ('*unverdreht*'), 'unconquered.' Cp. Walter 'Ztschr.' vii. 378. We may perhaps add  $\epsilon\upsilon$ - $\tau\rho\acute{o}\sigma\sigma$ - $\epsilon$ - $\sigma\theta\alpha\iota$  (perhaps better  $\epsilon\upsilon$   $\tau\rho\acute{o}\sigma\sigma\epsilon\sigma\theta\alpha\iota$ ) *ἐπιστρέφεισθαι* Πάφιοι Hesych. The assumable  $\ast\tau\rho\sigma\sigma\omega$  =  $\tau\rho\alpha\kappa\acute{\omega}$  reminds us forcibly of the Lat. *torqueo*.— $\acute{\alpha}$ - $\tau\rho\sigma\pi$ - $\varsigma$  (also  $\acute{\alpha}\tau\alpha\rho\pi\acute{\omega}$ ) is commonly and probably rightly explained to be 'not to be turned aside.'—That  $\tau\rho\epsilon\pi$ - $\kappa\acute{\epsilon}\rho\alpha\upsilon\upsilon\omicron$ - $\varsigma$  (cp.  $\tau\rho\epsilon\pi\acute{\omega}\mu\epsilon\theta\alpha$   $\tau\rho\epsilon\pi\acute{\omega}\mu\epsilon\theta\alpha$  Hesych.) meant not 'delighting in lightning,' but 'fulmina torquens' seems to me to have been proved by Gust. Meyer 'Stud.' vii. 181.—We have perhaps a metaphorical application of our root in the Skt. *tark-a-s* 'conjecture,' 'reflection,' in reference to which Schweizer 'Ztschr.' xii. 302 recalls the Lat. 'volvare animo.' Again, 'turning' and 'twisting' is the way of the *versutus*, the knave and cheat; Skt. *trk-van* 'thief,' with which Schweizer aptly compares the Lat. *trīc-ae*, *trīcārī*, *intricare*, *extricare*, in which the physical meaning 'windings' is still evident ('*extricata densis cerva plagis*' Hor. 'Carm.' iii. 5. 31). It may be doubted whether the Homeric epithet for the sly Phoenician merchants,

τρώκται, means 'gnawers,' 'sweet-tooths' (cp. τρώξ 'worm'), as the ancients presume, or belongs here. As far as sound goes the first interpretation is preferable.—Seeing that it is extremely doubtful whether a *p* ever took the place of *k* in Skt., I can now question whether Grassmann 'Ztschr.' ix. 20 is right in connecting some Skt. forms in *p*. The rt. *trap* means 'to be ashamed,' *trap-as* 'confusion,' 'shame.' *trp-rá-s* 'restless,' 'hasty,' 'anxious' and the synonymous *trp-ála-s* recall both the Gk. εὐ-τράπ-ελο-ς which can hardly be separated from *τρέπω* and still more the Lat. *trep-idu-s*. The Lat. *p* for an old *k* (as in *lup-us*, *Ep-ona*(?), *sap-io*) is established by *trep-i-t* 'vertit' (Paul. 'Ep.' 367), cp. Corssen 'Nachtr.' 72, i<sup>2</sup>. 117, while *trapetum* and *trapes* are borrowed from the Greek.—The OIr. *torc* in *muintorc*, Cymr. *torch* 'torques' (Z<sup>2</sup>. 791, 155) is set down by Ebel 'Beitr.' ii. 154 as borrowed from the Latin.

To these examples of the change of *k* into *p*, which appear to me to be certain, may here be added a few stems in the case of which it can only be said that the change is probable. It has long been established (Bopp 'Gl.' etc.) that the Skt. and Zd. *ap* (fem.), n. pl. *áp-as* instr. pl. *ad-bhís* 'water' is not to be separated from the Lat. *aqua*, the Goth. *ahv-a* ποταμός, OHG. *aha* and *awa*, OPruss. *ape*, Lith. *ùpé*, 'river' (Nesselman 'Deutsch-Preuss. Vocabularium' Königsb. 1868 p. 22). But the Latin and Teutonic forms point to an original *k*, which we may safely assume for the Indo-Germanic period. In Greek we may expect to find it represented by *π*, as also in all the Italian dialects except Latin. As we saw at p. 119, we may without violence refer to a stem *āp* with the meaning 'water' the proper name *Μεσσ-άπ-ιοι* whose country in lower Italy does, in fact, lie just between two 'waters' (cp. *Μεσο-ποταμία*, *Μεθ-ύδριον*, *Inter-amna*), a fact which led Pott ii<sup>1</sup>. 43 to the expression of the like opinion. It is true that at first sight this meaning does not equally suit the Locrian *Μεσσάπιοι* mentioned Thucyd. iii. 101, nor the *Μεσσάπιον ὄρος* in Boeotia and Thrace, nor the Laconian *Μεσσαπέαι*. Also the name of the river *Ἀπι-δανός* (cp. *Ἀπιδών*) may be easily explained to mean 'the water-distributer' (rt. *do*, *da* No. 270). (Cp. Skt. *áb-da-s* 'cloud,' properly 'water-giver.') Pott (*ut sup.*) is right again in comparing the old name of the Peloponnesus γῆ *Ἀπία* with a long *ā* (Aesch. 'Suppl.' 790) with the later Slavonic name *Morea* from the Slav. *more*



=mare, and so 'Water-land.' And the attempt has been made to derive even the much-discussed Homeric ἐξ ἀπείης γαίης (whose derivation from ἀπό, Buttm. 'Lexil.' i. 67, Pott i<sup>2</sup>. 446, has its difficulties) from the stem *ap* with a short vowel. It would then contain the idea 'from the land over the sea,' 'over the water,' and this would suit τηλόθεν, with which ἐξ ἀπείης γαίης is connected, and the expression would be a natural one. Of the Italians probably the *Appuli* and the old Volscian town *Apiola* (Strabo v. p. 231), belong here, but hardly the Lat. *amnis* (cp. the OIr. *abann* 'river'), for in Latin we ought to find the *k*. Froehde 'Ztschr.' xxii. 256 adds ἡπειρο-s, which he even compares with the MHG. *uover* in spite of the fact that elsewhere an *h* occurs in Teutonic. Sanskrit is the language which presents the most difficulty. For, as we have seen, labialism cannot be established for Sanskrit. But perhaps Fick i<sup>3</sup>. 473, 489, has hit on the 470 right solution in assigning the Lat. *aqua* (Goth. *ahva*) and the Skt. *ap* with the corresponding Persian and Lithuanian words to two distinct roots. Nothing but very uncertain conjectures can be made as to the original meaning of both of them. The word can hardly have anything to do with the rt. *ak* 'be quick,' with which Joh. Schmidt has connected *aqua*. It must be left equally doubtful whether the Gk. ἀπ belongs to *aqua* or to the Skt. *ap*.

If we compare βου-κόλο-s with αἰ-πόλο-s (No. 595), ἵππο-πόλο-s, we shall be very much inclined to assume in this case the same change of *k* to π. If we add αἰγι-κορ-εῖς (Lobeck 'Phryn.' 652), we get the older ρ in the place of the λ, and are brought to an Indo-Germ. rt. *kar*. A trace of the guttural is to be seen also in the Elic θεη-κόλο-s (Hesych. θεο-κόλο-s, κολεῖν ἐλ-θεῖν) by the side of θεη-πολέ-ω. I think we may with Benfey 'Ztschr.' viii. 90 and Froehde 'Beiträge zur Lat. Etymologie' p. xiii. identify this rt. *kar* with the Skt. *kar* 'stir oneself,' 'go,' 'walk.' But it is impossible to separate the above-mentioned compounds from the rt. πελ which occurs in πέλ-ω, πέλ-ο-μαι, ἀμφί-πολο-s, πολ-εύω, πωλέ-ω and πωλέ-ο-μαι. The fundamental notion is 'turn,' then 'revolve,' 'turn oneself about,' whence arises the more indefinite meaning of traversing in the sense of 'versari,' and whence we



easily arrive at the transitive use as applied to the driving of cattle. Most of these meanings are attached also to the Skt. *kar*; *gō-kar-a-s* 'trodden by oxen,' then 'trodden' generally, is the passive to *βου-κόλ-o-s*, the active to it is *kāraka-s* 'driver,' 'keeper.' *kāra-s* 'going,' 'movement,' also used of the constellations, may be compared to *πόλο-s*. The most colourless meaning of *πέλειν*, *πέλεσθαι*, which comes out already in Homer, and which means hardly anything more than 'to be in a certain state,' 'to be,' is likewise established for the Skt. *kar* in the 'Pet. Dict.' Now as the same scholars have seen, the Lat. *col-e-re* agrees with this. As a link between the rt. *col* and *πελ* we have *in-quil-īnu-s* and *Ex-quil-iae* (*Esquiliae*) acc. to Corssen ii<sup>2</sup>. 1024, which words belong to *in-col-a*, *col-ōnu-s* and, as Froehde justly remarks, point to an older *kval* or *kvel*. On the relation of *qu* to *c* in these and other words, Corssen ('Ital. Sprachk.' 72 ff.) has made valuable comparisons, but they do not prove that *qu* in Latin is always the result of a modification possible for every *c*. In its application to the ground *col-e-re* finds its analogy in *πόλο-s*, which acc. to Hesych. is also ἡ μεταβεβλημένη γῆ εἰς κατασποράν, and also in the use of *πολεύειν*, *ἀναπολεύειν*, *θαλαμηπόλος*, *θεο-πόλος*. The notion 'traverse' will serve to connect many of these uses with the primary meaning and with each other. For *agrum colere* we ought to compare also the Zd. *car-āna* (m.) 'field.' We

471 have here then to do, it seems, with a word of primitive culture, and it is significant, that it still preserves in the East and in Greece its pastoral application, while in Italy it receives the application to agriculture and religion, and in Greece that also to the trade which everywhere accompanies travel. I know of no corresponding words in the northern languages except the ON. *fal-r*, OHG. *fal-i* 'for sale' (Germ. *feil*), which agree with *πωλεῖν*, but are explained quite differently by Fick i<sup>3</sup>. 671. — The different treatment of Ascoli 'Ztschr.' xii. 432 ff. and Corssen's remark (i<sup>2</sup>. 428) do not convince me. I cannot be sure whether the adjectives *εὖ-κόλο-s* 'easy,' *δύσ-κόλο-s* 'hard to please,' or 'to get round,' which do not occur before Attic times, and which may easily be linked with these in meaning, belong here, and so to the words with the *κ*, or not.

Froehde's attempt (*ut sup.*) to identify the Lat. *que-o* (rt.

*qui*) with a rt.  $\pi$  deduced from  $\nu\eta\text{-}\pi\iota\text{-}\sigma$ , will not find many supporters. Rather do we get from  $\nu\eta\text{-}\pi\acute{\upsilon}\text{-}\tau\iota\sigma$  a rt.  $\pi\upsilon$ , and then there is a wide gulf between the meanings of *que-o* and  $\nu\eta\text{-}\pi\iota\text{-}\sigma$ . I cannot accept the latest theory about these words which is expounded by Bezenberger and Fick ('Beitr.' ii. 272, 341) who also sever entirely the Homeric  $\pi\iota\nu\tau\acute{o}\text{-}\sigma$  from the absolutely synonymous  $\pi\epsilon\pi\nu\mu\acute{\epsilon}\nu\sigma$  and connect it with the Skt. rt.  $k\bar{i}$  'perceive' (No. 649). On the developement of the  $\iota$  by anaptyxis cp. below p. 731. — Cp. Pott W. i. 459 and on *queo* Ascoli 'Lautl.' 55.

Anyone who has read this discussion of Labialism will perceive at once that in the few examples that are adduced of a dialectic variation between  $\kappa$  and  $\pi$  — particularly the Thessal.  $\text{Κίριον} = \text{Πίριον}$  (O. Müller 'Dorians' ii. 521),  $\text{κόρνο}\psi = \text{πάρνο}\psi$  (Ahrens 'Aeol.' 219),  $\text{Κύδνα} = \text{Πύδνα}$  (Steph. Byz.) — the  $\kappa$  has a presumptive priority. For the first word the form  $\text{Κουάριος}$  is remarkable, an epithet under which Poseidon was worshipped in the neighbourhood of  $\text{Πίριον}$  ('Journal des Savants' 1829 p. 515). Unless we have here one of chance's freaks, we might conjecture that this  $\text{Κουάριος}$  (for \* $\text{Κουιριος}$ ) contains the link between  $\kappa$  and  $\pi$ , i. e. a Greek *qu*.

We may here mention also  $\text{πύανο}\text{-}\sigma$  by the side of the usual  $\text{κύαμο}\text{-}\sigma$  'bean;' the two forms are discussed by Kuhn 'Ztschr.' xi. 309, and, with a very different result, by Ahrens 'Rhein. Mus.' xvii. 343. That we have here  $\pi$  as the equivalent of  $\kappa$  is completely proved by the fact that the same month that was called  $\text{Πυανεψιών}$  by the Attics went by the name  $\text{Κυανοψιών}$  in Samos. Cp. the inscription discussed by Kirchhoff in the 'Monatsber. der Berl. Akad.' 1859 p. 739 ff. The Samian  $\text{κύανος}$  was related to  $\text{πύανος}$  then as the Ion.  $\text{κοῦ}, \text{κῶς}, \text{κότρε}$  to 472 the Att.  $\text{ποῦ}, \text{πῶς}, \text{πότρε}$ , and consequently was the older form,  $\text{πύανος}$  the later. This refutes Ahrens' conjecture that the word is to be referred to the Skt. *push* 'nourish.' For then the  $\kappa$  would be inexplicable. Why we should reject the well authenticated statement that  $\text{πύανος}$  is identical with  $\text{κύαμος}$  'bean,' I do not understand. This is not inconsistent with the fact that according to other accounts  $\text{πύανος}$  denoted a kind of broth. The festival of the  $\text{Πυανέψια}$  however was called  $\text{Πανόψια}$  or  $\text{Πανοψία}$  outside Attica, as Harpocration, Suidas,



and Photius s. v. show by a quotation from the orator Lyeurgus. According to the latter and Ahrens the name meant a 'general cooking,' but may it not have been a convenient shortening of *Πυρόψια*, in which case we should have established the series *Κυα, Πυα, Πα?*

An Aeolian *π* by the side of an Att. *τ* for an original *k* occurs in *πέσσυρες, πίσυρες* (No. 648), and in *πέμπε* (No. 629). To this we may now add the Cyprian *πείσει* 'he will repay' ('Table of Idalion' ll. 12 and 25), which is thus completely synonymous with the *ἀποτεισεῖ* (tabb. Heracl.), the Homeric *ἀποτίσει* (Deecke and Siegismund 'Stud.' vii. 252), and consequently belongs to No. 649. But the ordinary Greek *ποινή*, which Fick i<sup>3</sup>. 533 compares with the Zd. *kaēna* 'revenge,' 'avenger,' would, if it belongs here, prove that the labial extended still further. Since an initial *p* in Latin hardly ever arose from *k* the identification of *ποινή* with *kaēna* compels us to regard the Lat. *poena* as a word borrowed from the Greek. The old derivation of both words from the rt. *pu* is defended by Corssen 'Ital. Sprachk.' 140, though he leaves the important Cyprian form out of account. The Homeric *ἀ-ποινα* 'ransom-money' (probably for *ἀπ(ο)-ποι-να*) shows still more clearly the fundamental notion of paying.

## b.

A Greek *β* corresponds in the following cases to an Indo-Germanic *g*, which in Sanskrit, Lithuanian, and Slavonic has remained unaltered, or has changed into the corresponding palatal, while in Teutonic the *g* is shifted to *k*. The Italian and Keltic languages too now and then show the labial.

634. Root *ga* go. Aor. *ξ-βη-ν*, pres. part. *βι-βά-ς* (Hom.), iterative *βά-σκ-ε*, vbl. adj. *βα-τός-ς*, pr. *βαίν-ω*. — *βῆ-μα* step, *βω-μός-ς* steps, altar, *βη-λό-ς* threshold, raised place, *βέ-βη-λο-ς* trodden, profane, *βά-σι-ς* a going, a pedestal, *βά-θ-ρο-ν* step, *βά-δ-ο-ς* a going, *βα-δ-ί-ξ-ω* walk along, *βέ-βα-ιο-ς* firm, *βι-βά-ξ-ω* make to come, bring, *βι-βάσθ-ων* striding along.

Skt. rt. *gā* go (aor. *á-gā-m*, pr. *gí-gā-mi*), *gá-ti-s* a



going, *ga-m* go (pr. *gám-ā-mi*, *gá-kkh-ā-mi*), *ga-tá-s* gone, *gam-áj-ā-mi* make to come, bring up. —

Zd. rt. *gā* and *gam* go, *jam* and *gaēth* come.

Lat. *bē-t-ē-re* (*ad-bī-t-e-re*, *im-bī-t-e-re*, *re-bī-t-e-re*), *ar-bī-ter*, *ven-i-o*, Umbr. *ben-ust* venerit, Osc. *kúm-bened* convēnit.

Goth. *qim-an*, OHG. *quēm-an*, *kom-an* come; Goth. *qum-s* arrival, OHG. *bi-quām-i* (Germ. *bequem*) comfortable.

Bopp 'Gl.,' Pott W. i. 16 ff., Benf. ii. 58, Fick i<sup>2</sup>. 555. — The rt. *ga* then changed first to *gva*, then to *ba*, as did the nasalized *ga-m* to *gvam*—regularly represented in Goth. by *gam*—and then to *βav* (*βαiv-ω* = *βav-j-ω*), Umbr. Osc. *ben* (Aufr. and Kirchh. i. 89), to which may be added the Osc. *ce-bn-ust* = 'huc venerit' ('Stud.' ii. 437), where it is to be noticed that the Graeco-Italians agree in having an *n* where Skt. and Teuton. have *m*. — The reduplicated present-form *βi-βá-s* corresponds to the Skt. *gí-gā-mi* just as the iterative *βá-σκ-ε* corresponds to the Skt. *gá-kkh-ā-mi*, i. e. *ga-sk-ā-mi* (cp. 'Gk. Verb' p. 192). — Among the Greek formations from the original root we may mention *βω-μός-s* which is proved to be related by the older meaning, preserved in Homer (especially η 100), in which it approaches nearly to *βῆμα* and *βάθρον*, as also by the diminutive *βωμís* 'step' (Herod. ii. 125). The root is expanded in various ways by added consonants, especially, beside the above-mentioned nasal, by *d* (*βá-δ-o-s*), by *t* in the Lat. *bē-t-ere* (also written *baetere* and *bitere*), which is found uncompounded in Pacuvius, Pomponius, and Plautus (Mercator 464 R.), as well as in several compounds (Brix on Plaut. 'Capt.' 377) which have the regular *i*. The Lat. *ar-bī-ter* on the other hand comes from the simple rt. *ba* for *ga*, and its *t* clearly belongs, like that of *βα-τήρ* (Hesych.) and *ἐπι-βá-τηρ-s*, to the suffix; on *ar=ad* see Corssen 'Ausspr.' i<sup>2</sup>. 239. No doubt too *fun-ambu-lus*, *ambu-lā-re* are to be explained by a form *amb(i)-bu-lu-s*, so that here the root-syllable is represented by *bu*. — Since in *βá-δ-o-s* and *βa-δ-iζω* we have a clear instance of an amplificatory *d*, some scholars have been tempted to connect with them the Lat. *vād-u-m* 'ford,' and *vā-d-e-re*. But since the Lat. *d* can just as well be the representative of a *dh* = Gk. *θ*, and since moreover *vā-d-u-m* corresponds in sound to the Skt. *gādh-á-m* of precisely equivalent meaning, which in the 'Pet. Dict.' is derived from the rt. *gādh* 'stand fast,' 'get a firm footing,' it will be better to regard it as one of the numerous *dh* expansions of the rt. *ga*. This is also Corssen's opinion ('Beitr.' 59). — The meaning of *βiβa-ω-s* is noticeable: it connects itself with the perfect-stem *βεβα* 'to have stepped out,' 'to stand firm:'

also that of  $\beta\acute{\epsilon}\beta\eta\lambda\omicron\text{-s}$ , which, though with a different meaning, is a sort of passive to  $\beta\acute{\epsilon}\beta\alpha\omicron\text{s}$ . — We are forbidden to compare the Goth. *gagg-an*, OS. *gá-n* 'go' by the absence of the regular representative mute (Grassmann 'Ztschr.' xii. 132), and also the Lith. *žengiù* 'stride' which we can hardly separate from it. On both cp. Fick i<sup>3</sup>. 576.

635.  $\beta\alpha\theta\acute{\upsilon}\text{-s}$  deep,  $\beta\acute{\alpha}\theta\text{-os}$ ,  $\beta\acute{\epsilon}\nu\theta\text{-os}$ ,  $\beta\nu\theta\text{-ó-s}$ ,  $\beta\nu\sigma\sigma\acute{o}\text{-s}$  depth,  $\acute{\alpha}\text{-}\beta\nu\sigma\sigma\omicron\text{-s}$  bottomless,  $\beta\eta\sigma\sigma\alpha$  deep valley, gorge.

Skt. *gāh* dip oneself, bathe, *gāh-á-s* (adj.) bathing, (subst.) depth, interior, *gabh-īrá-s* deep, *gámbh-an* depth, *gáh-ana-s* deep, *gáh-ana-m* depth, precipice, *gabh-á-s* or *gadh-á-s* fissure.

474

Benf. ii. 66. — It is no doubt right to connect  $\beta\acute{\alpha}\pi\text{-}\tau\omega$  'dip,' rt.  $\beta\alpha\phi$ , ( $\beta\alpha\phi\acute{\eta}$ ,  $\beta\acute{\alpha}\mu\mu\alpha$ ,  $\beta\alpha\phi\acute{\epsilon}\upsilon\varsigma$ , perhaps the name of the river  $\beta\alpha\phi\acute{\upsilon}\rho\alpha\varsigma$ ), directly with  $\beta\alpha\theta$ . Here as elsewhere we have an early fluctuation of the aspirates. The counterpart of  $\beta\alpha\theta$ , to which belong also  $\beta\eta\sigma\sigma\alpha$  and  $\beta\acute{\alpha}\sigma\sigma\alpha\iota$ , is to be compared with a Skt. *gadh* which is now recognizable only in *gadh-á-s* (Schweizer 'Ztschr.' iv. 298), while  $\beta\alpha\phi$  may be compared directly with *gabh* in *gabh-īrá-s*, *gámbh-an*, but in the Skt. *gah*, *gāh* nothing is left but the pure aspirate breath. Otherwise Pott W. iii. 781. — There is considerable difficulty in  $\beta\acute{\alpha}\theta\text{-}\rho\text{-os}$  'pit,' which is near akin to  $\beta\alpha\theta\text{-}\acute{\upsilon}\text{-s}$  in meaning, but also suggests *fod-i-o* by its sound. But it would be difficult to derive the rt. *fod* from *gadh*. On the other hand we meet also with a possible connexion in the Lith. *bad-ai*, ChSl. *bodq*, 'to prick.' — Fick i<sup>3</sup>. 688 separates these words and  $\beta\alpha\theta\acute{\upsilon}\text{-s}$  from the Skt. *gadh*, *gabh*, and regards *bhadh* as the root: it is only  $\beta\acute{\alpha}\pi\tau\omega$  that he takes to be related to *gabh*. On the forms with *v* see below p. 716. — The only Keltic word which Stokes connects ('Beitr.' viii. 302, cp. 'Corm. Gl. Transl.' p. 18) is the OIr. *bádud*, Cymr. *boddi* 'mergi.' The OIr. *baithis* 'baptism,' *baitsim* 'I baptize,' Cymr. *bedydd* 'baptism,' cannot be related as Ebel ('Beitr.' iv. 171) thinks, but probably are derived from *baptisma*.

636.  $\beta\acute{\alpha}\lambda\alpha\nu\omicron\text{-s}$  acorn, peg, plug. — Lat. *glan(d)-s*. — ChSl. *želqdŭ*, Lith. *gilė* acorn.

Pott i<sup>1</sup>. 87, Benf. ii. 65, Schleicher 'Ksl.' 111, otherwise Miklos. 'Lex.' 194, Fick i<sup>3</sup>. 569. — Three families of language in which the meaning of the word is absolutely identical point to an initial *g*. — Cp. No. 637. —  $\beta\acute{\alpha}\lambda\text{-}\alpha\nu\omicron\text{-s}$  belongs to the stem of  $\acute{\epsilon}\text{-}\beta\alpha\lambda\text{-}\omicron\text{-}\nu$ , *glan(d)-s* to  $\beta\lambda\acute{\eta}\text{-}\mu\epsilon\nu\omicron\text{-s}$ . It is not easy to say what the suffix is in the Latin and Slavonic words.

637. Root  $\beta\alpha\lambda$  ( $\beta\epsilon\lambda$ ,  $\beta\omicron\lambda$ )  $\beta\acute{\alpha}\lambda\lambda\text{-}\omega$  throw, intr. fall;  $\beta\lambda\acute{\eta}\text{-}\mu\epsilon\nu\omicron\text{-s}$ ,  $\beta\lambda\eta\text{-}\tau\acute{o}\text{-s}$  hit,  $\beta\lambda\eta\text{-}\mu\alpha$ ,  $\beta\acute{\epsilon}\lambda\text{-}\omicron\text{s}$ ,  $\beta\acute{\epsilon}\lambda\text{-}\epsilon\text{-}\mu\omicron\nu\text{-}\nu$



missile, βελ-όνη point, needle, βολ-ή, βόλ-ο-s a throw, βολ-ί(δ)-s arrow, sounding-lead. — Skt. rt. *gal* (*gál-ā-mi*) trickle down, fall away, *vi-gal* pour down (intr.), tumble down, *gal-ana-s* trickling, running (of liquid), *gal-a-m* water (? cp. note on No. 123). — OHG. *quillu* (preterite *qual*) scaturio, *quëllâ* fons.

Bopp 'Gl.' Benf. ii. 291, Grassmann 'Ztschr.' ix. 28, Pott (doubtfully) W. i. 2, 443. — Brugman 'Morpholog. Unters.' i. 41, connects the Skt. *glā* 'feel oneself exhausted,' 'die away,' so that *gal*: *glā*: βολ: βλη, explaining the *ā*(η) in a new way—i. e. as being an expansion of the root. — Notwithstanding the remarkable difference of meaning I think the above comparison is warranted. For on the one hand, as regards the initial, we have to consider the Arcadian by-form ζέλλω, and also Hesychius's ζέλλειν ἔβαλεν (Ahrens 'Aeol.' 351), and on the inscription from Tegea edited by Bergk (Halle 1860) and Ad. Michaelis (Jahn's 'Jahrb.' 83, 585) we find ἐσ-δέλλω=ἐκ-βάλλω. And this same ζ confronts a β in the other dialects in two words (Nos. 638, 640), for which an original *g* is clearly proved. For this see below 475 p. 491. On the other hand we have to consider, as regards the meaning, the manifold application of the rt. βολ to water especially in εἰς ἄλα βάλλων (A 722), εἰσβάλλειν 'discharge itself' (of a river), ἐμβολή 'mouth of a river,' ἐκβάλλειν 'well forth,' ἔδωρ συμβάλλειν 'confluere,' δάκρυα βάλλειν 'shed tears' (δ 114, 198), and the remarkable intransitive use in the proverbial expressions βάλλ' ἐς κόρακας, εἰς μακαρίαν and in βαλοῦσα ψῆφος (Aeschyl. 'Eumen.' 751), and again in numerous compounds, among which συμβάλλειν 'meet,' 'fit,' along with σύμβολον deserves special notice. We can easily get from the meaning 'fall,' 'glide,' to that of 'slip away,' 'let slip,' 'let fly,' an arrow, etc. (cp. ἰο-χέ(ρ)-αιρα No. 203), and this application of the root seems to have been the source of its extended use. βέλ-ε-μνο-ν is a participial form like τέρ-ε-μνο-ς, μέδ-ι-μνο-ς, τέρ-α-μνο-ς. βάλανος too (No. 636) belongs here as 'something that has fallen away.' The connexion with the Lat. *volare* conjectured by Leo Meyer 'Vgl. Gr.' i. 37 has been acknowledged in several quarters. Schweizer 'Ztschr.' xii. 303 finds support for this comparison in the Skt. *gar-ūt* 'wing.' He and Hugo Weber ('Jahn's Jahrb.' 1863 p. 591) remind us of the relation of πέτ-ο-μαι to πί-πτ-ω (No. 214). But I find a considerable objection to this in the fact that *vol-are* can hardly be separated from *vēloω* and *vēlites*, which have 'swiftness' as their characteristic meaning, and this meaning is quite foreign to the words collected here (cp. Corssen 'Beitr.' 59, i<sup>2</sup>. 460).



638. βαρύ-s heavy, βάρος, βαρύ-τη(τ)-s weight, βαρέ-ω, ἐπιβαρέω (Arcad. ἐπιζαρέω) burden, weigh down.  
 Skt. gurú-s (for garu-s, comp. gár-ījas) heavy, gar-imán, guru-tā weight, worth.  
 Lat. grav-i-s, gravi-tā(t)-s, grav-ēdo, grav-ā-re, gravidu-s.  
 Goth. kaur-s βαρύ-s, kaur-itha, kaurein-s βάρος, kaur-jan βαρεῖν, ἐπιβαρεῖν.

Bopp 'Gl.,' Pott W. iii. 714, Benfey ii. 291. — The agreement in meaning is complete; *gurú-s* is according to the 'Pet. Dict.' the opposite of *laghú-s* (No. 168) just as *gravis* is of *levis*. As regards the sound, *garu* must be regarded as the stem, whence was developed *gvaru*; the Arcadian form ἐπιζαρέω, which occurs also in Euripides, points to another softening, that of *g* to *gj* (cp. No. 637). Lat. *grav-i-s* for *garu-i-s*, cp. Skt. *tanú*, Lat. *tenu-i-s* (No. 230). — Perhaps it is right to connect also the Lat. *brū-t-us* ('*brutum* antiqui gravem dicebant' Paul. 'Epit.' p. 31), in which case Latin as well would show a *b* in this form. Cp. Lett. *grūt-s* in Pott *ut supra*. — I have now discussed γέρας and the words related to it under No. 129 b. — The Gk. words in β must have some affinity with βρι (ἐπὶ τοῦ μεγάλου Hesych.), βρι-αρό-s, βριθ-ω, βριθ-ύ-s, where the *ι* may be compared with that of τριθ-ω by the side of the rt. *τερ*: also with βρίζειν 'nod,' 'fall asleep' (cp. οὐφ βεβαρηότες). — The objections of Heinr. Schmidt 'Synon.' i. 465 do not convince me: cp. Δ 223. It is not necessary that the original meaning should show itself in all uses of the words. Joh. Schmidt 'Voc.' i. 124 connects βριθω with βρενθ-ύ-ε-σθαι 'hold up the head,' 'plume oneself.' But there is no notion of heaviness in the latter word, though it is unmistakeable in the former; e. g. at II. 384, ὥς δ' 476 ὑπὸ λαίλαπι πᾶσα κελαυνή βέβριθε χθών, cp. Plato 'Phaedr.' 247 βριθει ὁ τῆς κάκης ἵππος μετέχων, ἐπὶ τὴν γῆν ῥέπων καὶ βαρύνων. The same objection stands in the way of the combination made by Fröhde in Bezzenb. 'Beitr.' i. 250. Cp. 'Gk. Verb' p. 501. The Goth. *au* by epenthesis (Delbrück 'Ztschr. f. d. Philol.' i. 148). — In a note to Goid<sup>2</sup>. p. 91 Stokes connects the OIr. *goire* 'pietas,' *goiriu* 'magis pius' (Z<sup>2</sup>. 275), and on the other hand ('Beitr.' vii. 41) *gur* 'sorrowful.'

- 638 b. βασ-τάζειν lift, carry, βάσ-ταγμα burden. — Lat. *ger-o* (rt. *ges*), *ges-tu-s*, *ges-tā-re*, *ges-tā-men*, *ger-ō(n)* bearer. — Goth. *kas* cask, ON. *kas-ta* carry, throw, Eng. *cas-t*.

Fick i'. 569, Bugge 'Ztschr.' xix. 429, Van. i. 223, Zimmer 'Nominal suff. a' p. 71. — βαστάζειν is a frequentative like *ges-tā-re*.

The Lat. *vas*, probably for \**gvas*, bears to *βav-* the same relation as that of *ven-io* to *βαίνω*. Still it is hard to account for the *s* between the two vowels in *vas-is*, *vas-a*. It is probably related to the rt. *βa* (cp. the Zd. *jah* 'go,' 'come') in a causative sense.

639. *βία* force, strength, *ἀντί-βιο-s* fighting against, *ὑπέρ-βιο-s* overpowering, overbearing, *βιά-ω*, *βιάζ-ο-μαι* overcome, *βία-ιο-s* forcible, violent.

Skt. *gi* (*gáj-ā-mi*) conquer, overcome, *gḡā* trans. overpower, intrans. to be overwhelmed, subst. *gḡā* (fem.) excessive power, extravagant pretensions, *gḡā-jā-s* (isolated comparative) superior, stronger, older. — Zd. *ji* overpower.

Pott W. i. 61, 558, P. W. iii. 154. — I doubt much whether this rt. *gi*, *gvi* has anything in common with the stem *f-* (*fl-s*) discussed at No. 592. — *super-b-us* closely resembles *ὑπέρ-βιο-s*, and since *j* in the middle of a Latin word does now and then disappear after a *b* (dat. and abl. *-bus* = Skt. *-bhjas*), it is easy to bring the two words together. But I now see I must allow that Schweizer is right, in expressing doubts as to this comparison 'Ztschr.' xii. 303. The second element of the Lat. word might be the rt. *ba* (No. 634), or even the rt. *fu* (cp. also Corssen 'Beitr.' 61). — Pott connects also *βι-μῖν* 'raviah,' reminding us of the Skt. *gi-nā-mi* the pres. to *gḡā*, and Fick i<sup>3</sup>. 570 the Lat. *vie-sce-re* 'grow old,' as an intransitive to *βιᾶν*. Cp. Brugman 'Morpholog. Unters.' i. 6, where he is probably right in taking the rt. *gi-ā* to be an expansion of *gi*.

640. *βί-ο-s*, *βί-ο-το-s*, *βί-ο-τή* life, way of life, livelihood, *βίβ-ω* (aor. *βιῶ-ναι*, Ep. fut. *βέλ-ο-μαι*, *βέ-ο-μαι*) live.

Skt. *gīv* (*gīv-ā-mi*) live, *gīv-ā-s* living, *gīv-ā-tha-s*, *gīv-i-tā-m* life, *gīv-ā-tu* (fem.) life, means of life. — *gīnv* (*gīnv-ā-mi*) stir (intrans.), revive (trans.). — Zd. *jī* and *jīv* live, *jīv-ya* living.

Lat. *vīv-o*, *vīv-u-s*, *vīt-a*, *vic-tu-s*.

Goth. *giu-s* living, *ga-giunan* ἀναζῆν, OHG. *quēk*, MHG. *quicken* revive. — ON. *kvikv-endi* animal.

ChSl. *živ-q* vivo, *živ-ŭ* vivus, *živ-o-tŭ* vita. — Lith. 477 *gyv-en-ù* live, *gýv-a-s* living, *gyv-a-tà* life, livelihood.

OIr. *bíu*, *béo* vivus, *beothu*, *bethu*, gen. *bethad* (st. \**bivatat*-) vita, *biad*, gen. *biith* (st. \**bivata*-)

victus; Cymr. *byw* vivus, *bywyd* vita, *buyt*, later *buyd* food.

Bopp 'Gl.,' Pott W. i. 746, Benf. i. 685, Schleicher 'Ksl.' 135, Corssen i<sup>2</sup>. 389, Ebel 'Beitr.' ii. 160, Stokes 'Ir. Gl.' 113. — The original initial *g* became *gv*, which explains the Gk.  $\beta$  and the Lat. *v*. An attempt has been made to separate  $\beta$ io-s,  $\beta$ io-ro-s from  $\acute{g}$ iv and to refer it to the shorter rt. *gi* (Grassmann 'Ztschr.' ix. 27). But the complete identity of formation between  $\beta$ i-o-ro-s, the Skt.  $\acute{g}$ iv-á-tha-s, and the Lith. *gyv-a-tà*, and the difficulty of explaining the *o* if there was no consonant after the *i*, make it far more probable to my mind that we ought to assume for Greek a stem  $\beta$ i $\phi$  of which the *i*, probably long at first, was naturally shortened before the vowel.  $\beta$ elo-mai ('Gk. Verb' p. 468) or  $\beta$ éo-mai must be a present-form of the lengthening class, and so for  $\beta$ eio-mai. ζάω is discussed on p. 491, and the guttural that shows itself in *vixi*, *victus* on p. 597. — Otherwise Max Müller 'Ztschr.' xv. 217, against whom see Pott W. i. 756.

641.  $\beta$ io-s bow. — Skt.  $\acute{g}$ jā, Zd. *jya* (f.) bowstring.

Bopp 'Gl.,' Pott i<sup>1</sup>. 205, 'Pet. Dict.,' Fick i<sup>2</sup>. 570. — Perhaps the Lith. *gijč*, 'thread' in weaving, 'mesh,' 'noose' is related. Cp. *νεῦρον*, *νευρά* No. 434. —  $\beta$ ios is clearly distinguished from the *νευρά* at Δ 125, and has accordingly shifted its meaning. — Otherwise Max Müller 'Ztschr.' xv. 216.

642.  $\beta$ o- $\acute{h}$  call, cry,  $\beta$ oá- $\omega$  call out.

Skt. rt. *gu* (reduplic.  $\acute{g}$ ō-*gu*) make to sound, proclaim  
— (intensive 'shout'), *gāu-s* speech, the goddess of speech.

Lat. *bo-ē-re*, *bov-ā-re*, *re-bo-ā-re*; *bov-ī-n-ā-ri* abuse.

ChSl. *gov-orŭ* θόρυβος, *govor-i-ti* θορυβεῖν, θρυλλεῖν.

OIr. *guth* vox (st. *\*gutu-*), *gute*, *gutte* vocalis (for *guthide*).

Aufrecht 'Ztschr.' i. 190, Miklosich 'Lex.' 133, Corssen 'Beitr.' 63, Pott W. i. 738. — As elsewhere the Lat. words agree in their initial with the Gk. ones. In meaning *clamore bovantes* in Ennius ('Ann.' 571 Vahlen) comes nearest to the Gk.  $\beta$ oāv, whose *o* is shortened from *of* as in  $\beta$ of-ás= *bōv-is*. — *bov-īnā-tor* according to Gellius xi. 7 *tergiversator* seems originally to have meant 'crier,' 'swaggerer,' cp. Döderlein 'Synonym. u. Etymol.' vi. 41, where as regards the formation of the word *coquānare* is aptly compared. — Aufrecht conjectures that  $\acute{z}$ -*γο-o-v*,  $\gamma$ ó-o-s,  $\gamma$ oá- $\omega$  'wail,' 'howl,' are to be referred to the same rt. *gu*



and have kept the guttural; γό-η(τ)-s 'wizard' perhaps belongs to these (cp. *incantare*, Fick i<sup>3</sup>. 572). With γό-o-s (for \*γόf-o-s) Bugge (Bezzenb. 'Beitr.' iii. 119) compares the Gothlandic *kau-ma* 'howl,' cp. OHG. *chū-mo* 'wail,' Fick iii<sup>3</sup>. 38. — Cp. No. 136.

643. Root βορ βι-βρώ-σκ-ω, βε-βρώ-θ-ω devour, βορ-ά meat, βορ-ό-s gluttonous, βρώ-μα food, βρω-τήρ eater.

Skt. rt. *gar* (*gir-ā-mi gil-ā-mi*) swallow, *gara-s* (adj.) at the end of compounds, swallowing, (subst.) drink.

Lat. -*vor-u-s* (*carni-vōru-s*), *vorā-x*, *vorā-re*, *de-vora-re*, *vorā-go*.

Lith. *gér-ti* drink, ChSl. *grŭ-lo* throat, *žrě-ti* de- 478  
glutire.

OIr. *gelid* consumit, inf. *gleith*.

Pott W. ii. 627, 238, Bopp 'Gl.,' Fick i<sup>3</sup>. 562. — Latin has here preserved only a *v* from the *gv* that was developed from *g* (cp. No. 126, Corssen i<sup>3</sup>. 87). Still the old *g* appears in the form *gur-g-e(t)-s*, an instance of broken reduplication, which is to be compared with the Skt. *gár-gar-a-s* 'whirlpool,' also in *gur-gul-io* 'gullet.' Other words which have preserved the same *g* are γαρ-γάρ-ιζεν 'gargle,' Lith. *ger-klė* 'gullet,' γαρ-γάρ-ων 'uvula,' γέρ-γερ-ο-s βρόγχος (Hes.), probably also the Lat. *gul-a* (cp. Skt. *gala-s* 'throat,' 'neck,' OHG. *kēla* Delbrück 'Ztschr. f. d. Philol.' i. 149) along with *glu-ti-re*, *in-gluv-is* (Joh. Schmidt 'Voc.' ii. 290). Pictet i. 412 adds the Lat. *glis* (gen. *glir-is*) 'dormouse,' comparing it with the Skt. *gir-ī-s*, *gir-ikā* 'mouse.' βάρ-α-θρο-ν (Ahr. 'Aeol.' 232) is certainly formed from this root; it agrees with *gurgēs* in meaning 'chasm,' 'abyss,' and may moreover be compared with *vorago*, and its Aeolic form shows a ζ in the place of the β of the other dialects as in No. 637 (Döderlein 'Gl.' 2439). — The rt. *gras* which in Skt. means 'swallow' (*grās-ā-mi*), may be regarded as an expansion of the rt. *gar* by *s*; it may be traced in the Gk. γρά-ω (Callim.) 'esse,' Hesych. γρά- φάγε Κύνριοι, and perhaps in the Lat. *grā-men*. — Probably too the OIr. *bráge*, gen. *bráget* 'neck' belongs to this root, and reminds us especially of the Lat. *gurgēs*, OHG. *krage* 'neck,' 'gullet.'

644. βοῦς ox. — Skt. *gāu-s* (st. *gav*). — Lat. *bō-s* (st. *bov*).

— OHG. *chuo* cow. — ChSl. *gov-ędo* ox. — OIr. *bó*, OCymr. *buch* (pl. *biu*) vacca.

Bopp 'Gl.,' Pott W. i. 739, Ebel 'Beitr.' ii. 156, Stokes 'Ir. Gl.' 583, according to Miklosich 'Radd.' 17 and Aufrecht 'Ztschr.' i. 190 from

the rt. *gu* (No. 642) in the meaning 'bellow.' — Perhaps the word *γαῖος* or *γαῖός* ὁ ἐργάτης βοῦς, in Hesych. and other lexicographers, contains the old guttural. In that case it exactly corresponds to the Skt. *gavajá-s* 'bos gavaeus,' or to the adj. *gav-já-s* 'belonging to cattle.' — On the other hand *βούβ-αλο-s* (most likely for *βου-f-αλο-s*) comes near to the Skt. *gav-a-las* 'buffalo' (Pictet i. 332), though they differ in meaning, as *βούβαλο-s* and *βουβαλί-s* in older authors mean a kind of gazelle. The Lat. *bū-bulu-s* again is used adjectively.

645. *βρέφ-os* embryo, child, young. — Skt. *gárbh-a-s* embryo, child, young. Zd. *garewa* fetus. ChSl. *žrěb-ę, žrěb-ŕcŕ* pullus.

Pott W. iii. 793, Benfey ii. 139, Schleicher 'Ksl.' 111. — The often-compared (recently by Zimmer 'Nominal suffix *a*' 290) OHG. *kalp*, which is phonetically identical, is placed elsewhere by Jac. Grimm 'Gesch.' i. 33 (cp. Diefenbach 'Vgl. Wtb.' ii. 436) in consideration of the Gothic *kalbō* 'young cow' (δάμαλις). This only confirms us in the comparison of the Gk. Ind. and Slav. forms of the word, which however agree in stem only, not in the suffix. The root is clearly *grabh* (later *grah*) 'concupere' ('Pet. Dict.'), so that *βρέφ-os* is 'conceptum,' of animals (Ψ 266 *βρέφος ἡμίονον κύνουσιν*) and mankind. — The active to *βρέφος* is the Skt. *gárbh-a-s*, Zd. *garewa* in the meaning 'concupiens,' 479 'womb,' 'lap;' its correlative the Gk. *δελφ-ύ-s* 'uterus' (cp. *δολφός-s* ἡ μήτρα Hesych.) with the softer liquid and dentalism, whence *ἀ-δελφε-ιό-s* (shortened to *ἀδελφεός, ἀδελφός*), = Skt. *bhrātā sá-garbh-ja-s*, i. e. 'frater couterinus' (Kuhn 'Ztschr.' ii. 129), and *δελφίς* (st. *δελφ-ῖν*) 'dolphin,' 'belly-fish' (*δελφίς μεγακήτης* Φ 22), in Aeolic with a β *βελφίς* (Ahr. 41) which comes so much the nearer to *βρέφος*. Bühler 'Or. u. Occ.' ii. 337 raises against this derivation the objection that *δελφύ-s* does not mean 'venter' but merely 'uterus.' But such an enlargement of the meaning is very natural, and hence in Hesych. and the 'E. M.' the word has *γαστήρ* given among its meanings, and *γαστήρ* itself very often stands for *μήτρα*. The Skt. *gárbh-a-s* too has had its application extended, inasmuch as, according to the 'Pet. Dict.,' like *alveus* it means 'the bed of a river.' On the Gallic proper name *Galba* which, according to Suetonius ('Galba' 3) meant 'praepinguis,' which Fick and others place here, cp. Angermann 'Stud.' v. 392. To this may be added *Δελφοί, Βελφοί*, Boeot. (now attested from an inscription, 'Athenaeum' iii. p. 479), named no doubt from its position in a deep ravine. With respect to Bühler's proposed derivation, which makes *δελφ-ί-s* mean 'robber' (though the Skt. *grabh* only means 'take'), the derivation given above has this advantage that it

connects *δελφίς* with a word which exists on Greek soil. The dentalized st. *δελφο* occurs also in *δελφαξ* 'young pig.' This agrees well in meaning, so that it properly means simply 'pullus' with a specialising suffix. It is natural to suppose that the Lat. *ger-men* arose from *gerb-men*, especially as the Skt. word means also 'the fruit of plants.' Is it possible that *grě-miu-m* too is of the same origin? Cp. Walter 'Ztschr.' xii. 405, Corssen 'Nachtr.' 236, i<sup>2</sup>. 799.

To these examples of  $\beta = g$  occurring in ordinary Greek may be added one that is confined to the Boeotian dialect, *βανά*, *βανηκός* = *γυνή*, *γυναικός* already discussed at No. 128. This form is specially remarkable because the Goth. *qvinô* of like meaning shows us the addition of the parasitic *v*, while the OIr. *ben* (in compounds *ban-*, e.g. *ban-chu* 'canis' Z<sup>2</sup>. 854) shows also the fully developed labial, and it cannot be doubted that it comes from the rt. *gan*, *γεν*. Perhaps there is a word in ordinary Greek as well which shows the same root with a  $\beta$ . We may safely compare the former part of *πρέσ-βυ-s* with the Lat. *pris-* in *pris-cu-s*, *pris-tinu-s*, and the by-forms *πρέσ-γυ-s* and the Cretan *πρεῖ-γυ-s* render it probable (Ahr. 'Dor.' 111) that the syllable *βυ* arose from *γυ*; the *ει* of the latter form cannot have arisen in this dialect by compensatory lengthening, and so points to a st. *πρεῖs* = Skt. *pra-jas* comp. of *pra* ('before'). The *i* too in *pris-cu-s* is long, as is shown by the apex on inscriptions (Brambach 'Orthogr.' 25), so that *pris* and *πρεῖs* are identical, *πρες* may have come from *πρεῖs*, like the New-Ionic *ἀπόδεξις* from *ἀπόδειξις*. *γυ* may well be only a phase of the rt. *γα*, *γεν*, and accordingly *πρέσ-βυ-s* means 'born before.' The often-maintained derivation of this *βυ* from the rt. *φυ* cannot be reconciled with the dialectic forms,<sup>480</sup> still less the complete identification with the Lat. *pris-cu-s*, of which only the first syllable is related. Notwithstanding the somewhat antagonistic views of Schweizer ('Ztschr.' xii. 303), Sonne (ibid. 295) and Corssen i<sup>2</sup>. 781 I still hold to this derivation.

On *viß* by the side of the Skt. *niḥ* it will be enough to refer the reader to No. 439.

As a matter of conjecture we may also class the  $\beta$  in *ἔρεβος* and its derivative *ἔρεβεν-νό-s* (by the side of *ἔρεμ-νό-s*, cp. rt. *σεβ*, *σεμ-νό-s*) as the representative of an original *g*, as



is done by Leo Meyer 'Ztschr.' vi. 19 and Grassmann ix. 28. For the meaning 'darkness,' 'gloom,' which occurs especially in *ἔρεβος ὑφάλον* Soph. 'Antig.' 589 and in the derived adjective, and that not exclusively in its usual reference to the lower world, answers completely to the Skt. *rāj-as*, *rāj-anī* in the attested meaning of 'darkness,' 'night' and to the Goth. *riquis* (σκότος) of like meaning. The prothesis of the ε would find its closest analogy in *ἔρημος* (No. 454). The only reason why I do not give this comparison as certain is that there appears not only before ν, in *ὀρφ-νό-s*, *ὀρφ-νη*, *ὀρφ-ναῖο-s*, *ὀρφ-νινο-s*, which Fick i<sup>3</sup>. 498 connects with the ON. *iarp-r* 'fuscus,' but also before a vowel, in *Ὀρφ-εύ-s*, a word which is closely connected with the gloom of Hades, a φ instead of the β, and the assumption just given leaves the φ unexplained. Hence it is after all possible that *ἔρεβος* is connected with *ἐρέφειν* 'roof over,' 'cover,' seeing that elsewhere darkness is regarded as a covering, and that in some cases, which have to be discussed below, β has arisen from bh. Cp. Pott ii<sup>2</sup>. 393, Walter 'Ztschr.' xii. 387.

The stem *ταρβ*, which occurs in *τάρβ-ος* 'fright,' *ταρβ-έ-ω* 'fear,' *ταρβ-αλέο-s* 'full of fear,' is compared by Kuhn 'Ztschr.' xiii. 454 with the Skt. *tarj* (*tárj-ā-mi*) 'threaten,' 'drive at,' 'revile,' *tarj-ana-m* 'a threatening.' In spite of doubts expressed by Pott W. iii. 462, the comparison has everything in its favour, both sound and sense. Fick i<sup>3</sup>. 598 adds also the ON. *thjarka* 'scold,' AS. *thrac-ian* 'frighten.' It is still easier to explain *tor-vu-s* to be for *torg-vu-s* and from the rt. *targ*. I prefer however to omit *ταργαίνω* *ταράσσω* compared by Froehde 'Ztschr.' xiii. 453, along with several glossematic words of similar meaning, and also *ταράσσω* itself (st. *ταραχ*).

Aufrecht 'Ztschr.' xii. 400 points out an Indo-Germanic stem *varg*, with the meaning 'turn,' 'twist,' 'distort.' Hence the Skt. *vrj-inā-s* 'crooked,' 'deceitful' (cp. *δίκη σκολή*). The physical meaning has survived in the Lat. *valg-u-s* 'bow-legged' (cp. Corssen i<sup>2</sup>. 543). Now to this corresponds the  
 481 Gk. *ῥαιβό-s* 'crooked,' 'crook-legged.' The only question is how the diphthong is to be explained. Aufrecht seems inclined to assign to *ῥαγ* a weaker by-form *ῥιγ* which occurs in the Goth. *vrai-qu-s* *σκολιός*, and to derive *ῥαιβό-s* thence by

addition of sound (*Zulaut*). But when we reflect how seldom a Gk. *ai* arises from an *ι*, it appears more likely that we ought to assume a form *φραγ-ιo-s*, from which *φραιγ-ιo-s* is developed, like *εἰνί* from *ἐνί*, then by labialism *φραιβιo-s* and then, like *εἰν*, *φραιβό-s*. The connexion of *rū-ga*, for *\*erū-ga* with this root is supported especially by the AS. *vrinc-le* 'wrinkle.' But about *verg-o* I am doubtful. Perhaps we ought to connect some of the words discussed on p. 351 under No. 513. Froehde 'Ztschr.' xxii. 255 explains the Lat. *ur-vu-s* 'crooked' as for *vorg-vu-s*.

The same scholar ('Ztschr.' xxiii. 312) identifies *σεμ νό-s* (cp. *ἐρεμ-νό-s*) along with *σέβας* with the Gothic *svik-n-s* *άγνός* 'pure,' 'chaste.' Phonetically there is no objection to this; on the contrary the preservation of the *σ* before a vowel indicates that the word once began with two consonants, and the more accurate account given in the 'Pet. Dict.' of the uses of the Skt. root make me hesitate about my former comparison of the word with the Lat. *sev-ē-ru-s* and the Skt. *sēv* (*sēv-ā-mi*) 'sojourn,' 'wait on,' 'attend to.' At the same time there is no inconsiderable difference between the meaning of *σέβειν*, *σέβεισθαι* 'reverence,' *σέβας* 'religious awe,' and that of the Teutonic words. The latter come nearer to *σεβ-ερό-s* *εὐσεβής*, *δίκαιος* Hesych. A form *\*segu-ē-ru-s* might help us to connect *sev-ē-ru-s*.

I do not venture to pronounce an opinion on the double forms *γλήχων* and *βλήχων* 'pennyroyal' and the Dor. *γλέφαρον* by the side of *βλέφαρον* 'eyelid.' Analogy and also the ChSl. *glip-ajā* inf. *glip-ati* 'cernere' (Fick i<sup>3</sup>. 574) are on the side of the priority of the *γ*. Hugo Weber ('Etym. Unters.' i. 80, 85) has discussed these '*Wortbinionen*,' as he calls them, and comes to the conclusion that the forms with *γ* are altogether distinct from the forms with *β*. But who will believe that language had two names for the same plant and the same part of the body, formed by the same suffix from different roots? Where a word begins with more than one consonant there occur, as we shall often find, particular letter-changes for which complete analogies cannot always be found.



## C.

There is only one root in which we can be sure of  $\phi$  as the representative in ordinary Greek of an original  $gh$ , i. e.  $\nu\phi$  from *snigh*, discussed at No. 440, where its representatives with gutturals are adduced. The change from  $gh$  to  $\phi$  pre-  
 482 supposes a middle step  $ghv$ , clearly established by the Gothic and Slavonic *hv*. (Cp. Fick i<sup>3</sup>. 828, Ascoli 'Lautl.' 157.) It is to be noticed that this is the only instance of *hv* before a vowel in the middle of a word, and that the Latin forms with *gu ningu-em, ningu-it*, with the medial which regularly represents the aspirate, actually show us the group of sounds from which the Gk.  $\nu\phi$ - $\alpha$ ,  $\nu\phi$ - $\epsilon$  arose.

The interchange of  $\chi$  and  $\phi$  in Greek itself is treated of by Lobeck 'Rhemat.' 31, with especial reference to the numerous instances where an initial  $\phi\lambda$  answers to  $\chi\lambda$ . In particular cases  $\chi$  may really have been transformed to  $\phi$ , e. g. in  $\phi\lambda\iota\alpha\rho\acute{o}\text{-}s$  a by-form of  $\chi\lambda\iota\alpha\rho\acute{o}\text{-}s$  (Hesych.), but it would be very rash to make this a sufficient reason for connecting Nos. 197 and 412, though they are of kindred meaning. Perhaps we may venture to place  $\epsilon\lambda\alpha\phi\text{-}\rho\acute{o}\text{-}s$  under No. 168 with  $\epsilon\lambda\alpha\chi\acute{\upsilon}\text{-}s$ ; at any rate the meanings present no difficulty. This view might find some confirmation in Hesychius's  $\epsilon\lambda\alpha\theta\rho\acute{\alpha}$   $\epsilon\lambda\alpha\phi\rho\acute{\alpha}$ , in so far as it would serve to establish the variety of the form assumed by the aspirates. Hugo Weber ('Jahn's Jahrb.' 1863 p. 593) prefers to consider the forms separate in all these cases, and is not staggered by the strangeness of the coincidence that words of exactly the same meaning and even with the same suffix should have come from different stems. Joannes Grammaticus gives  $\alpha\upsilon\phi\acute{\eta}\nu$  =  $\alpha\upsilon\chi\acute{\eta}\nu$  as Aeolic (Ahrens 42). We shall recur to this form below at p. 592 in connexion with Theocritus's  $\acute{\alpha}\mu\phi\eta\nu$ . — Conversely the Thessalians said  $\delta\alpha\upsilon\chi\nu\eta$  for  $\delta\acute{\alpha}\phi\nu\eta$  (Ahrens 'Aeol.' 219). The priority of the  $\chi$  is probable here too if we consider the general relation of the labial consonants to the gutturals, and agrees with Max Müller's connexion of  $\Delta\acute{\alpha}\phi\nu\eta$  in the sense of 'the morning glow' ('Oxford Essays' 1856 p. 57), with the Skt. *dah-ana-s* 'burning,' from the rt. *dah* (*dagh*) 'burn,' which gives the Daphne myth an ingenious interpretation. If we only saw



how the Morning Dawn became the Laurel! Max Müller answers: 'by mere homonymy' ('Lect.' ii. 502) *δάφνη* 'burning glow' became identified with *δάφνη* 'laurel,' which was so-called because it burns easily. Cp. Hehn.<sup>3</sup> p. 525. — W. H. Roscher calls my attention to Hesychius's glosses *καφάζειν* *καχάζειν* and *κωφεύειν* *κωχεύειν*. In the former case the priority of the guttural is attested by *cach-innu-s* and the (unauthenticated) Skt. *kakh* (*kákh-ā-mi*) 'laugh,' in the latter by *άνα-κωχή* and the related words. — There are one or two trustworthy instances of a Latin *f*, as the representative of an older *gh*, especially *fel* = *χέλος* (No. 200) and *fri-are* = *χρίειν* (No. 201). Cp. Corssen i<sup>2</sup>. 159.

It is hardly safe to pronounce the words *ἔχις*-s (No. 172) and *ὄφις*-s (No. 627) identical, because the two words have not exactly the same meaning, *ὄφις* being the genus 'serpent,' *ἔχις* 483 the species 'adder' (Schol. on Eurip. 'Orest.' 479, Lobeck 'El.' ii. 364), and because both existed side by side in the same dialects. So that we have here quite a distinct case from that of *γλήχων* and *βλήχων* discussed above.

Froehde in Bezzenberger's 'Beitr.' iii. 12 ff. tries to establish *φ* in a number of other words as the successor to *gh*, e. g. in the rt. *ἄλφ* (No. 398), which he identifies with the Skt. *argh*, *arh* 'bring in,' 'fetch,' 'be worth' (cp. No. 165). There is much to be said for it, but there is a difficulty in *ἀνέρες ἀλφησταί*: also I do not see how to separate the Skt. *ṛbhú-s* 'clever' from the rt. *ἄλφ*. Both Froehde and Fick ii<sup>2</sup>. 175 connect *φρίσσω* (rt. *φρικ*) with the Sabine *fircu-s*, Lat. *hircu-s* and *horrere*, and the former holds that the OHG. *niero* (No. 435) proves that *νεφρός*-s must have had a guttural originally, for though a *g* might have fallen out from the Teutonic word, a *b* could not.

#### d.

We have next to consider whether Labialism has at all extended its influence into the region of the dental consonants. As far as I know it has never been maintained that a Gk. *π* ever corresponds to an original *t*. And it would be hard to find any ground for such a view. Where an Aeolic *π* corresponds to a *τ* in the other dialects there is generally, as Ahrens

(p. 41) has correctly remarked, a guttural clearly underlying both sounds. In one proper name, which we may here consider with advantage,  $\tau f$  passes into  $\pi$ , so to speak, before our very eyes.  $E\sigma TFE\Delta//Y\Sigma$  is the legend on a coin from the Pamphylian Aspendos, that is, as Siegismund 'Stud.' ix. 93 shows, *Estvedius* =  $\text{'}\text{A}\sigma\pi\acute{\epsilon}\nu\delta\iota\omicron\varsigma$ .  $tv$  here became  $p$  as in the provincial German *eppes* = *etwas*, and like the way in which  $dv$  in the Lat. *bi-s*, *bī-ni* became *b*.

The same is the case with some words in which a dialectic  $\beta$  corresponds to an ordinary Greek  $\delta$ , e.g. in the case of  $\beta\epsilon\lambda\phi\acute{\iota}\varsigma$  and  $B\epsilon\lambda\phi\acute{o}\iota$  mentioned at No. 645. — The origin of  $\delta\beta\epsilon\lambda\delta\varsigma$  is uncertain, and hence it is uncertain also whether the Doric form  $\delta\delta\epsilon\lambda\delta\varsigma$  or the ordinary Greek form is the older one. Perhaps the word belongs to  $\beta\acute{\epsilon}\lambda\omicron\varsigma$ ,  $\beta\epsilon\lambda\acute{o}\nu\eta$  (No. 637); if so  $\beta$  and  $\delta$  both came from an older  $g$ . — Since we see from No. 271 that in  $\delta\acute{\epsilon}\lambda\epsilon\alpha\rho$  the  $\delta$  belongs to the root, we shall have to agree with Ahrens in reference to the Aeol. form  $\beta\lambda\eta\rho$  in assuming here a natural transition from  $\delta$  to  $\beta$ , because  $\delta\lambda$  is a combination never allowed in Greek. We should have here then a real instance of  $\delta$  becoming  $\beta$ , but it happens in a combination of sounds, and combined consonants  
484 are not under the same laws as simple ones. —  $B\omega\delta\acute{\omega}\nu$  given as the Thessalian equivalent of  $\Delta\omega\delta\acute{\omega}\nu\eta$  (Ahr. 'Aeol.' 219) may easily have been connected with the name of the god so highly honoured there, and so with the stem  $\Delta\iota f$  (No. 269) —  $B\acute{\omega}\delta\omega\nu$  being for  $\Delta(\iota)F\acute{\omega}\delta\omega\nu$  — but the  $\omega$  and the origin of the second syllable would still be obscure. (Otherwise Preller 'Gr. Myth.' i<sup>2</sup>. 96, Unger 'Philol.' xxiv. 397.) — With reference to the word  $\sigma\acute{\alpha}\nu\delta\alpha\lambda\omicron\nu$  which in Aeolic was  $\sigma\acute{\alpha}\mu\beta\alpha\lambda\omicron\nu$ , Schwabe 'De deminutivis' p. 83 has shown that it was probably borrowed from the Persians (*sandal*, 'calceus'). This would bring the fluctuation of the medial under the head of those double forms which arise so easily in the case of foreign words.

In the case of the labial aspirate contact with the dental region is more frequent. Every one knows how readily the dental aspirates change to labial aspirates in the Italian languages. With reference to these languages Ascoli suggests an explanation (mentioned above on p. 424) which rests on the assumption that it was not the aspirates themselves but only

the spirants that arose from them which changed the organ of articulation. Cp. Nos. 306, 307, 309, 311, 312 b, 314, 316, 319, 320, 325. As analogous to this movement we must consider the occurrence in the Aeolic dialect of  $\phi = \theta$ , to some extent in the same stems and roots; e.g. the Thessalian  $\phi\eta\rho$ ,  $\phi\eta\rho\acute{\iota}\omicron\nu$ , as to which Ahrens ('Aeol.' 42, cp. 219) has collected the testimonies of the old grammarians. These forms are supported by the Thessalian proper name  $\Phi\iota\lambda\acute{o}\phi\epsilon\iota\rho\omicron\varsigma$  (ει Thessal. and Boeot. = η) in No. 25 of the 'Inscriptiones ineditae,' published by Ussing (Havniae, 1847). The meaning of the name is clearly 'lover of the chase,' and strengthens the old assumption that the Thessalian name for the Centaurs,  $\Phi\eta\rho\epsilon\varsigma$ , which Homer uses, is identical with  $\theta\eta\rho\epsilon\varsigma$ . To this we must add the proper name  $\Phi\epsilon\tau\tau\alpha\lambda\acute{o}\varsigma$ , occurring on a Theban inscription (Beermann 'Stud.' ix. 63), cp.  $\phi\epsilon\tau\tau\alpha$  (No. 314); perhaps Ahrens is right in assuming a  $\phi\rho\acute{o}\nu\omicron-s = \theta\rho\acute{o}\nu\omicron\varsigma$  in  $\pi\omicron\iota\kappa\iota\lambda\acute{o}\phi\rho\omicron\nu$  (Sappho 1) cp. No. 316;  $\phi\acute{o}\iota\nu\alpha = \theta\acute{o}\iota\nu\eta$  'banquet,' which only occurs at Alkman fr. 24 B<sup>3</sup>:  $\phi\acute{o}\iota\nu\alpha\iota\varsigma \tau\epsilon \kappa\alpha\iota \acute{\epsilon}\nu \theta\iota\acute{\alpha}\sigma\omicron\iota\sigma\iota\nu$ , where it may easily be an Aeolism.  $\theta\acute{o}\iota\nu\eta$ , which I formerly connected with  $\theta\acute{\upsilon}\epsilon\iota\nu$  'sacrifice,'—a comparison which involves some questionable assumptions—is best connected with the Skt. rt.  $dhi$  ( $dhi-n\acute{o}-mi$ ) 'satisfy,' 'delight' ('Pet. Dict.,' Van. 407). The substantive  $dh\acute{e}n\bar{a}$ , which Fick i<sup>3</sup>. 631 regards as completely identical with  $\theta\acute{o}\iota\nu\eta$ , means ('Pet. Dict.') in the sing. only 'milch-cow,' in the plur.  $dh\acute{e}n\bar{a}\varsigma$  'a milk-drink' as well.— $\phi\alpha\rho-\nu-\mu\acute{o}-s$   $\tau\omicron\lambda\mu\eta\rho\acute{o}\varsigma$ ,  $\theta\rho\alpha\sigma\acute{\upsilon}\varsigma$  (Hesych.) has already been discussed in its relation to  $\theta\rho\alpha\sigma-\acute{\upsilon}-s$  under No. 315.  $\phi\alpha\rho-\nu-\mu\acute{o}-s$  may easily be for  $*\phi\alpha\rho\rho-\nu-\mu\omicron-s$ ,  $*\phi\alpha\rho\sigma-\nu-\mu\omicron-s$ , as  $\Theta\alpha\rho\acute{\upsilon}-\mu\alpha\chi\omicron-s$  is without doubt for  $*\Theta\alpha\rho\sigma-\nu-\mu$ . The word is an expansion from the shorter stem  $\theta\alpha\rho\sigma\nu$ , like  $\eta\delta\nu-\mu\omicron-s$  from  $\eta\delta\nu$ .—All 485 these words seem to belong to the Aeolic dialect.—In the Epirot inscriptions discovered by Karapanos ('Dodone et ses ruines,' Paris 1878) there occurs, along with many instances of  $\theta\acute{e}\acute{o}\varsigma$ ,  $\theta\acute{\upsilon}\epsilon\iota\nu$ , an occasional  $\phi\acute{e}\acute{o}\varsigma$ ,  $\phi\acute{\upsilon}\epsilon\iota\nu$  ('Sixième catégorie,' No. 3,  $\tau\acute{\iota}\nu\iota \kappa\alpha \phi\acute{\epsilon}\omega\nu \eta \eta\rho\acute{\omega}\omega\nu \acute{\epsilon}\nu\chi\acute{o}\mu\epsilon\nu\omicron\iota \kappa\alpha\iota \phi\acute{\upsilon}\omicron\nu\tau\epsilon\varsigma \acute{\alpha}\mu\epsilon\iota\nu\omicron\nu \pi\rho\acute{\alpha}\sigma\sigma\omicron\iota\nu$ ). This looks as if the Epirot labialism was a provincialism, which arose after the aspirates had passed into spirants, and is of the same nature as the modern Greek  $Fibae = \Theta\eta\beta\alpha\iota$ , Russian  $Feodor = \Theta\acute{e}\acute{o}\delta\omega\rho\omicron\varsigma$ .



It is true that for the early period from which we get  $\phi\acute{\eta}\rho$  this assumption is open to grave objections. Perhaps in this case the  $v$  of the rt. *dhvar*, which we conjectured at No. 314 for  $\theta\acute{\eta}\rho$ , was the cause of the change. —  $\phi\lambda\acute{\alpha}\omega$  by the side of  $\theta\lambda\acute{\alpha}\omega$  ('crush,' 'press hard') is ordinary Greek, as also is  $\phi\lambda\acute{\iota}\beta\omega$  by the side of  $\theta\lambda\acute{\iota}\beta\omega$  of similar meaning, related to the Lat. *flāg-ru-m*, *con-flīg-e-re*. Fick here calls in the aid of the Goth. *bliggvan* 'strike' to prove that  $\theta$  came from  $\phi$  (i<sup>3</sup>. 703). It might not be easy to prove this, but I see no clear grounds for the contrary assumption.

## 2. DENTALISM.

We have seen above how the change of an original guttural consonant into the corresponding labial admits, in most cases at least, of the explanation, that the labial spirant  $v$  affixed itself to a particular class of gutturals, and then exercised in time a retrospective labializing influence. But the gutturals have another tendency as well, namely that towards a union with the spirant  $j$ . This  $j$  develops most naturally out of a following  $i$ . The guttural shifts involuntarily forwards towards the palate and becoming palatal produces the palatal spirant between itself and the vowel to which this spirant is related. These changes have been thoroughly discussed by Rud. v. Raumer ('Aspiration und Lautverschiebung' p. 37), by Schleicher in his 'Zetacismus,' and by Ascoli ('Lautlehre' 76). The difference in the pronunciation of the Latin  $c$ , when followed by  $e$  or  $i$  is most minutely discussed by Corssen i<sup>2</sup>. 49 ff. Rud. v. Raumer, p. 93, is clearly right in his explanation of the process. He suggests that the  $c$  was in these cases pronounced as a palatal, i. e. like  $kj$ . It was not till the language had reached a further stage of developement that the soft palatal spirant  $j$  was replaced by the dental sibilant, and this in time produced the assibilation of the original letter, of which we have no clear proofs till a somewhat later period of Latin. It can hardly be doubted that the same principle  
 486 accounts for the origin of the palatal consonants in Sanskrit. Here, however, we must by no means look for the palatalizing

influence in the following vowel<sup>1</sup>, but must assume an involuntary shifting of the *k* towards the forward part of the mouth, best explained by the assumption of a parasitic *j*. In Greek we must assume for a certain period, which lies beyond the time of historical tradition, changes of a similar kind. We shall have to show below how this is the only assumption that will account for the origin of ζ from γ*j* and of the σσ (Boeot. ττ) from *kj*. But this same hypothesis serves also to explain the undoubted occurrence of τ in a number of instances as the representative of an older *k*. We call this change Dentalism, though we consider it to have arisen throughout from an older Palatalism. Dentalism is therefore here the second stage of phonetic disfigurement. A still greater change arises when the sound after its first transformation produces a neighbouring sibilant out of the palatal spirant, and this is the explanation of the phenomena which Schleicher calls Zetacism. On finding then that a Gk. τε corresponds to an Indo-Germ. *ka* we assume the following steps in the process of transformation: κε κ*j*ε τ*j*ε τε. In the same way δ is connected with γ by the help of an intermediate γ*j* δ*j*. The assumption of the latter change is supported by Hesychius's ζεύσασθαι γεύσασθαι, confirmed by ζεύω γεύω ('E. M.'). For since it is well known that ζ does arise out of δ*j*, we can here all the more certainly infer the existence of the conjectured intermediate δ*j*. This process serves to put in a clear light the parallelism between Dentalism and Labialism. The former, however, is still rarer in Greek than the latter. Undoubtedly too it is no mere chance that the κ which changes to τ is almost always followed either by an ι or by the allied

<sup>1</sup> F. de Saussure in the 'Mém. de la soc. de linguist.' iii. 359 acutely brings his attempt to demonstrate an original variety of *a*'s into connexion with his question. We should then be able to explain the distinction between *árka-ti* and *árka-s* and the like by taking the *a* in the first case as of the nature of an *e*, in the second as of the nature of an *o*. It remains to be seen if this theory admits of general application. Somewhat similarly Collitz in Bezenb. 'Beitr.' ii. 305. Osthoff 'Morpholog. Unters.' i. 116 propounds the same view as held by Verner. — We may now refer to the paper of Collitz and Hübschmann ('Ztschr.' xxiv. 409) already mentioned on p. 87.



We also find *quattor* with assimilation of the *v* (Ritschl 'Rhein. Mus.' viii. 309). Thence we arrive at the Umbr. *petur-*, which only occurs in compounds, at the Lat. *quadru*=*quartu* (*quartu-s* most likely from *quattu-tu-s*), at the Osc. *petor-a* (Fest. p. 206), at the Goth. *fidvēr* and *fidur* and at the Homeric *πίσιπ-ες*, Aeol. *πίσιπες* (cp. Ahrens 'Aeol.' 409). Since we find *σσ* as well as *v* in the latter form, it must be derived not from the shorter *katur* but from *katvar*, *πίσιπες* being for *πετφες*, whence the Boeot. *πέτταπας*. According to the rules of Aeolic, *v* represents the *a*-sound, which appears dulled also in the Dor. *τέτορ-ες* for *τετφες* (*τέττοπες* is suspicious, Ahr. 'Dor.' 279).—From *k* were developed by palatalism the Skt. *ḱ* and the Slav. *č*, along with which must be classed the Doric and Ionic *τ*, while *σσ* in *τέσσαρε-s* is clearly for *σφ*, for *τφ*.—*τρά-πεζα* shortened for \**τετρά-πεζα*, *τρυ-φάλ-εια* according to Fick in Bezzenb. 'Beitr.' i. 64 for \**τετρυ-φάλεια*, \**τετρυ*=Lat. *quadru*.—The Ir. fem. *cetheoir* for a pre-historic *cetesor-es* corresponds admirably to the Skt. fem. *Katasr-as*.

649. Root *τι* *τί-ω* (*τείω*) pay, value, honour, *τί-ν-ω* pay, expiate, mid. (Hom. *τί-νν-μαι*) get paid, exact a penalty, punish, *τι-μή* price, honour, *τιμά-ω* honour, value, *τίμη-μα* valuation, census, *τιμη-τή-s* censor, *τί-σι-s* penalty, regard (Theogn. 337).

Skt. *ki* (*ki-nō-mi*) arrange in order, pick up, gather, *ki* mid. (*ḱáj-ē*) avenge, punish, *apa-ki-ta-s* honoured. Zd. *ci* collect, seek, *ci* expiate, *ci-tha*, *ci-thé* penalty, *kaēna* revenge.

489 On the forms with *ει* *τείω*, *Τεσίας*, *ἀποτείσει* 'Gk. Verb,' p. 158, Gust. Meyer Bezzenb. 'B.' i. 82, Sauppe 'De tit. Tegeat.' Gött. 1876-77. *τείω* corresponds exactly to the Skt. *ḱájē*.—Benfey ii. 332 ff., Kuhn 'Ztschr.' ii. 387, Fick i<sup>3</sup>. 532, whom I cannot follow in their development of the meaning, because it seems to me in spite of Pott's objections (W. i. 463) that the meaning 'pay' is the fundamental one for the Greek words. This appears most clearly in Homer, e.g. χ 218 σφ' δ' αὐτοῦ κῆρατι τίσεις, in *ἀπο-τίνω* (Θ 186), in *τιμήεις*, which almost universally means 'pretiosus,' 'costly,' and in the relation preserved by *τιμή*, *τίμημα* to the latest times, to payments of different kinds. The meanings branch out therefore in two directions—'to set a price on,' whence 'value,' 'estimate,' 'honour'—and 'to give a price for,' whence 'pay,' and in the middle 'get paid,' 'exact as penalty.'—There is considerable difference between this use and that of the Skt. rt. *ḱi*, of which the 'Pet. Dict.' gives four distinct meanings. Grassmann however ('Wörterb.' p. 444) decides in the main for



the explanation here given for the first *ki* 'put in a row,' which he separates completely from the second, which means 'perceive.' We see other instances in *áp-ι-θύó-s* and *num-eru-s* (No. 431, 488) of the developement of the idea of number from that of 'fitting,' 'arranging' in a row or otherwise, and for the notion 'punish' we find analogies in the rt. *νεν* (*νέμεσις*) No. 431. From the cognate languages we may perhaps find a related word in *κοῖος*, according to Athen. X p. 455 d the Macedonian for 'number.' In ChSl. (Miklos. 'Lex.' 1117) we find *če-na τιμή* 'pretium,' *čen-i-ti τιμᾶν*, 'aestimare,' and *čín-ü τάξις* (in Russian the 'Tschin' is the order of the precedence of officials, cp. *τιμή* in the sense of an office). On the other hand *čít-a ἀριθμῶ*, *ἀναγινώσκω* corresponds to the Skt. rt. *kit* which is apparently expanded by a *t*, though the meanings of the latter have taken another direction (Schleicher 'Ksl.' 99). — Is it possible that after all the Lith. *skait-ý-ti* 'count,' 'pick up,' *skait-lius* (= ChSl. *číslo*) 'number,' has preserved what was the complete form of the initial letters? Benfey 'Or. u. Occ.' ii. 379 conjectures that *ski* was the full form of the root, but gives quite a different interpretation of it, connecting with it the Lat. *sci-o*. The latter, however, has I think been explained more simply at p. 109. From the same root arose by labialism the Cypr. *πείσει* discussed on p. 487 and apparently *πουνή*. — From Irish we have possibly a connexion in *cin*, gen. *cinad* 'debt.'

650. *τί-s* n. *τί* interrog. pronoun, when enclitic, indefinite.

— Skt. *ná-ki-s* nemo, *má-ki-s* (Zd. *má-ci-s*) nequis, *ki-m* quid? Zd. *ci-n-em* acc. s. = *τί-v-a*, *ci-s-ca* quisquis. — Lat. *qui-s*, *qui-d*, Osc. Umbr. (indefin.) *pi-s*, *pi-d*, Osc. *pit-pit* (Festus) = *quid-quid*. — OIr. *cia* quis? Cymr. *pui*, *puy* quis?

Bopp 'Vgl. Gr.' ii<sup>2</sup>. 207, Fick i<sup>2</sup>. 532. — All these forms are to be referred to *ki*, the weaker form of the interrogative stem; the stronger form is treated of at No. 631. Bopp is most likely right in adding to the list the pronominal enclitic adverb *kit* or *kid* which is attached to particular pronouns (*kaç-kit* 'aliquis') and with a variety of meanings to other words, and is perhaps the best correlative of the Osc. *pid* mentioned at No. 647. (Otherwise Boehtl. and Roth in the 'Pet. Dict.'). — On traces of this *i*-form in Slavonic cp. Schleicher 'Ksl.' 266 f. — As the double *π* in *ῥππως* was deduced at No. 631 from *κf*, *πf*, we must deduce the double *τ* in the likewise Homeric 490 and Aeolic *ῥττῆς* (Aeol. also *ῥττῶας* in the acc. plur.) from *kj* and *τj*. So Schweizer 'Ztschr.' xii. 304, who points out that O. Müller gave

this same explanation in 1831. *ā-sσα* for *ā-τια* *ā-tja* from the expanded stem *τιο* which appears most clearly in the Lesb. *τίφ*, *τίοισι* (Ahr. 'Aeol.' 127). Cp. below p. 608.

There is some doubt about the etymology of the Aeol. *πήλυι* = *τηλόσε* (Ahrens 41), to which may be added the proper name *Πηλεκλέας* from a Delphian inscription ('Ber. d. k. s. Ges. d. W.' 1864, p. 218). Keil indeed ('Rhein. Mus.' xix. 616) regards it as simply a mistake for *Τηλεκλέας*. The dialectic interchange of *π* and *τ* leads us to suppose that both sounds, as in the interrogative stem, originated in the guttural. But the Lat. *pro-cul* compared by Christ 113, which we must not separate from *cellere*, and in which we must assign the chief force to the preposition, as well as the Skt. *kīrā-s* 'long' (of time, cp. the OIr. *cían* 'long'), and the rt. *kal* 'tremble' are too far removed in meaning. Even the superl. *kar-a-mā-s* 'the last' is not after all equivalent to 'the farthest.' And since we meet the latter idea in the Lith. *tolì* (adv.) 'far,' 'a long way,' and again find other close connexions of the same words also with a *t* (Benf. ii. 256, Fick i<sup>3</sup>. 592), the whole comparison becomes a doubtful one, especially as it is not beyond the bounds of possibility that the different Gk. dialects developed the same idea from two distinct stems.

On the other hand there is one example which shows us *τ* on Greek soil by the side of *κ*. Lobeck 'Pathol. EL.' i. 20 adduces from the 'E. M.' 48, 39, where Herodian is given as its voucher, the form *ἀκινάγματα* = *τινάγματα*, 'vibrations,' and from Hesych. *ἀκίναγμος* *τιναγμός* *κίνησις*. With the help of a prothetic *ἀ* then the rt. *κ1* (No. 57) survived in these forms, while it assumed the *τ* in the usual *τινάσσω* and its derivatives, clearly not without the operation of the neighbouring *ι*. Otherwise Fick i<sup>3</sup>. 593.—Sonne's conjecture ('Ztschr.' xiv. 331), that the variously-explained *τηλύ-γετο-s* corresponds in its first factor to the Skt. *kāru-s* 'pleasant,' 'welcome,' is certainly temptingly satisfactory as far as meaning goes, but this kind of comparison of isolated words can never have much evidence in its favour. It is conceivable that the word may be related to No. 239 b, more particularly to *tāruṇa-s* 'tender' and *τᾶλις*.



## b.

There are but very few cases in which dentalism has changed an original *g* to *δ*. In most of them the different dialects vary to the extent of showing in some cases a *γ* or *β*,<sup>491</sup> and even *ζ* in the place of *δ*. Under this head comes the Arcad. *ζέλλω* = *βάλλω* rt. *gal* (No. 637), *ἐπι-ζαρέ-ω* by the side of *βαρύ-ς* for *γαρυ-ς* (No. 638), *δελφύς* and *δολφός* mentioned at No. 645, the latter of which corresponds letter for letter to the Skt. *gárbha-s*, possibly too *δέρεθρον* *λίμνη ἀποχώρησιν ἔχουσα* (Hesych.), in so far, that is, as we can venture to identify this with *ζέρεθρον*, *βάραθρον* No. 643. In that case *ζ* arises from *dj* for an older *gj*, *δ* comes from *dj* by suppression of the *j*, and *ζέρ-ε-θρο-ν* is related to *δέρεθρον*, *ζέλλω* to *δέλλω*, as *ρέζω* is to *ῥδω* from the rt. *φερ* (No. 141). — The same is the relation between *ζεύσασθαι* and *δεύασθαι*, both explained by *γεύσασθαι* (No. 131) in Hesych., the former probably Arcadian, the latter Cyprian (Gelbke 'Stud.' ii. 29). — Again *ζά-ω* belongs to the group discussed at No. 640. It stands for *\*δja-ω* and its most natural derivation is from the rt. *gi* (Zd. *jī* 'live'; cp. Grassmann 'Ztschr.' ix. 27, and Brugman 'Morpholog. Unters.' i. 7). The two synonymous stems *ζα* and *βιο* are then phonetically related: *ζα* arose by dentalism from the shorter rt. *gi*, *βιο* by labialism from the expanded *gīv* (Skt. *gīv*). — To these examples of *ζ* representing *γ* Leo Meyer (i. 38) adds the remarkable form of the participle *πε-φνζότ-ες* which is confined to books *Φ* and *Χ* of the *Iliad*, explaining it by *πε-φνγ-φοτ-ες*. The original existence of the *F* in the participial suffix is attested by the Skt. *-vāts*, *-vat*, but as a matter of fact the sound is nowhere to be found in any Gk. dialect, and must have been as good as extinct as early as Homer; for forms like *εἰδ-ότες*, *ἀρηρ-ότες*, *πεφευγ-ότες* cannot be reconciled with the existence of a *F*. It is improbable therefore that we should have in such a rare participial form the one single surviving trace of the old spirant. It would be possible indeed to bring forward the Hesiodic *λελειχ-μότ-ες* ('Theog.' 826) and derive its *μ* likewise from *F*, while the third of these rare perfect forms *μεμνζότε* 'rotting,' from the rt. *μυδ*, in Antimachus (Buttm. 'A. Gr.' ii<sup>2</sup>).



31), does not admit of such treatment so readily. The change of  $\gamma f$  to  $\xi$  in any case remains unproved. In *πεφυζότες* there is a further anomaly in the vowel of the stem, which is never short in the perf. partic. except before the feminine suffix (*ιδ-υία*) and that of the middle (*πεφυγ-μένος*). Now since we can explain the  $\xi$  in the subst. *φύζα* (cp. *μᾶζα*) more simply by the help of the suffix *ια* (cp. *μαν-ία*) and since we find the same  $\xi$  in *φυζακινό-ς* (N 102) and in the later *φυζαλέος*, where there is no trace of a  $F$ , it seems to me incomparably more probable that *πεφυζότες* along with its two comrades arises from the introduction into the verb of a noun-theme (*φυζα*,  
492 *φυζο*), of the same kind as those we are compelled to assume in the case of the aor. *ἐχραισμο-ο-ν* from *χραισμο=χρησιμο*, of *θέρμ-ε-σθαι* 'get warm,' and of *ἡμαρτ-ο-ν*, *ἡλιτ-ο-ν* ('Gk. Verb' p. 408), or possibly from a pres. *\*φύζω* = Lat. *fug-io*. — The Laconian form of *γέφυρα* (discussed at No. 125) was *διφοῦρα* (Ahr. 'Dor.' 122, 124). We should here maintain the origin of the  $\delta$  from  $\gamma$  more decidedly, if the root of the word were better established, and if there had not been also preserved the curious Theban *βλέφυρα* (Ahrens 'Aeol.' 174) though Beermann 'Stud.' ix. 58 ingeniously suggests that this is a mistake for *βδέφυρα*. In any case the word is very peculiar. — Still more doubtful is *δεῦκος* = *γλεῦκος*, which is said to be Aetolian (Schol. ad Nicandri 'Ther.' 625). Although the Lat. *dulcis* gives some support to the dental, it is possible after all that the whole form is only advanced to explain the Hom. *ἀδευκής*. Since, however, Apollonius Soph. in his Lexicon (cp. Hesych.) gives quite another explanation of *ἀδευκής* (*ἀπειοικώς*, *ἀπροσδόκητος*), the Aristarchian school seems to have known nothing of *δεῦκος*, and the stem-form which is presupposed has hardly any authority at all. — On the very doubtful tradition that *δᾶ* is a Doric by-form of *γᾶ* *γῆ* and appears also in *Δα-μάτηρ*, *Δη-μήτηρ* with dental instead of guttural, it is enough to refer the reader to Ahrens 'Dor.' 80. — We shall have to treat later of *δν* by the side of *γν* in *δνόφος* and *γνόφος* and of a few other cases.

In conclusion we should have a case of  $\delta$  representing an original guttural at least in one tolerably widely ramifying root in ordinary Greek, if we were sure that Benfey (ii. 140) is

right in comparing the Gk. *δράσσομαι* with the Skt. *grah*, Ved. *grabh*. But, however great the agreement in meaning between *δράσσεσθαι* 'grasp,' *δραχμή* 'a grasp,' 'handful,' *δραγμῖς* 'three fingers full,' 'a pinch,' and the Skt., the phonetic difficulty is just as great. For by the side of the *χ* of *δραχμή* we get a *γ* in *δράγμα* and actually a *κ* in *δράξ* *δρακός* 'hand,' with which M. Schmidt also puts *δάρκ-εσ* *δέσμαι* (Hesych.) i.e. 'bundles,' *manipuli*, *δράγματα*<sup>1</sup>. On the other hand we have already seen the rt. *grabh* ending in a labial in *βρέφος* and *δελφύς* (No. 645). The antiquity of the labial aspirate is attested also by the clearly related OPers. *garb*, Zd. *garew* 'take' (Benfey 'Die pers. Keilschriften' p. 80), Lith. *gréb-ti* 'grasp,' ChSl. *grab-i-ti* 'carry off,' 'rob' (Schleicher 'Ztschr.' vii. 223, cp. Delbrück 'Ztschr. f. d. Philol.' i. 15), with which the Gothic *greip-an* agrees in all but the tenuis. This shows the *h* in *grah* to be a remnant of *bh*, and we cannot give anything but *grabh* as the Indo-Germanic root, from which we could not arrive safely even at *δραχ*. But the only possible root to which we can refer the Greek forms is *δρακ*, whence *δράγ-μα* is formed like *πλέγ-μα* from the rt. *πλεκ*, *δραχμή* like *πλοχ-μός*. To the rt. *δρακ*, which we thus arrive at, corresponds possibly—though this is a mere conjecture—with loss of its initial consonant, the Lith. *rink-ti* 'collect,' 'pick up,' 'gather,' and the Lith. *rank-à*, ChSl. *rak-a* 'hand,' of like meaning with *δράξ* (Hesych. *δρακός* τῆς χειρός); otherwise Lottner 'Ztschr.' xi. 181, Miklos. 'Lex.' 815. Perhaps too *δρέπ-ω* has been labialized and belongs here, though Pott (ii<sup>2</sup>. 464) regards it as an expansion of the rt. *δrep* (No. 267). Hence *δρέπ-ανο-ν* 'sickle.' If so, the Coan promontory *Δρέκ-ανο-ν* is nothing but the older form of the oft-recurring *Δρέπ-ανο-ν*. So different is the road on which a strict observance of phonetic rules here compels us to travel.

Walter's conjecture ('Ztschr.' xii. 406), that *δύ-να-μαι* belongs to the rt. *gnā* (No. 135), *δί-δυ-μο-s* to the rt. *gan* (No. 128), does not seem to me to carry conviction with it owing to the want of correspondence in the vowels, though it has the support of Bugge 'Ztschr.' xix. 422.

<sup>1</sup> The same consideration invalidates Fick's *a* rt. *δapχ* (i<sup>3</sup>. 619). For there is no such thing as a *ç*.



## C.

We have only one fairly certain instance of the change of an original *gh* into *θ*. It is noticeable that Latin in this case uses the labial spirant to represent the guttural, a fact which points to an early fluctuation of the organ of the initial aspirate (Ascoli 'Ztschr.' xvii. 340).

651. Root *θερ* *θέρ-ο-μαι* warm, glow, *θέρ-ος* summer, *θερ-μός* warm, hot, *θέρ-μη* warmth, heat, *Θερμαί*, *Θερμά* (pl.) places with hot springs, *θέρ-μ-ε-τε* heat (pass. *θέρ-μ-ε-το*), *θερμ-αίν-ω* heat, warm.

Skt. rt. *ghar* (*ḡ-ghar-mi*, *ghṛ-ṛḡ-mi*) shine, *ghar-má-s* glow, warmth, OPers. *gar-ma-pada* a summer month, Zd. *gare-ma* warm, hot.

Lat. *for-mu-s*, *form-idu-s* hot, *for-nu-s* (*fur-nu-s*) stove, whence *forn-ax*.

Goth. *varm-jan*, OHG. *war(a)m*.

ChSl. *gr-ě-ti* *θερμαίνειν*, *gor-ě-ti* ardere. OPrus. *gor-me* heat.

OIr. *gor* warmth, fire, *goraim* I warm, burn.

Bopp 'Gl.,' Benf. ii. 195, Grimm 'Gesch.' 405, Schweizer 'Ztschr.' iii. 346 f., Leo Meyer viii. 274, Schleicher 'Ksl.' 105, 108, Nesselm. 494 'Altpr. Vocab.' 22, Grassmann 'Ztschr.' ix. 29, where also the Skt. *ḡhal-ā* is compared, which among other meanings has that of 'the sun's heat.'—In the face of the frequent representation of *r* by *λ* and the Hesychian forms *θαλ-υ-κρόν* λαμπρόν, *θερ-μόν*, *θαλίψαι* θάλψαι, *πυρῶσαι* it is hardly possible to regard *θαλ-π-ω* as anything but an expansion of the same root by *π* (cp. above p. 60; Pott ii<sup>2</sup>. 468) to which Lithuanian gives us a remarkable analogy in *žer-p-lě-ti* by the side of *žer-ě-ti* 'glow,' 'gleam.'—On the OPers. form see Spiegel 'Altp. Keilschr.' 195.—*for-mu-s* and *formi-du-s* are given by Paul. 'Epit.' p. 83, who rightly connects with it *for-cep-s* 'tongs,' an older form of which, *formu-cap-es* (plur. = *forcipes*) at p. 91 has been restored by Scaliger. A further modification is to be seen in *forp-ex* which has a diminutive suffix added. If we consider Latin alone we shall be strongly inclined to consider *fer-v-o*, *fer-v-e-o* and all belonging to them as connected. But the *v* gives rise to difficulties, and since the special application of the verb seems to be to boiling



water, I regard as more probably correct the attempt made at No. 415 to connect it with  $\pi\alpha\rho\text{-}\phi\acute{\upsilon\rho}\text{-}\omega$ ,  $\phi\rho\acute{\epsilon}\text{-}\alpha\rho$ , which is supported by the form *de-fru-ere* = *de-ferv-ere*, whence comes *de-frū-tu-m* 'must.' Otherwise Grassmann 'Ztschr.' xi. 88, Walter xii. 414. — On an Italian *f* for an old *gh* cp. *fos-ti-s* = *hosti-s*, Goth. *gast-s*, ChSl. *gostī*, Corssen i<sup>2</sup>. 158. — We can hardly doubt an original connexion with the words discussed at No. 202, 200, 197, especially as we find in Skt. the word *ghṛā-sā-s* with the meaning 'heat of the sun,' 'sunshine,' from a stem expanded by *n*. — Fick (i<sup>3</sup>. 81) gives a very different account of the words here collected. He traces them to no fewer than five different stems: (1)  $\theta\acute{\epsilon}\rho\text{-}\omega\varsigma$ ,  $\theta\epsilon\rho\text{-}\mu\acute{o}\text{-}\varsigma$ , to the root contained in the AS. *der-ian* with the meaning 'hurt,' 'injure,' quoting in support Z 331, A 667  $\pi\upsilon\rho\acute{o}\varsigma$   $\delta\eta\acute{\iota}\omega\iota\omicron$   $\theta\acute{\epsilon}\rho\epsilon\sigma\theta\alpha\iota$ . But  $\theta\acute{\epsilon}\rho\epsilon\sigma\theta\alpha\iota$ ,  $\theta\epsilon\rho\mu\acute{o}\varsigma$ ,  $\theta\epsilon\rho\mu\acute{\alpha}\iota\upsilon\epsilon\iota\nu$  often denote a 'mild warmth' ( $\theta\epsilon\rho\mu\acute{\alpha}$   $\lambda\omicron\epsilon\tau\rho\acute{\alpha}$ ), and it is very improbable that  $\theta\acute{\epsilon}\rho\omega\varsigma$  'the ripening summer time,' properly meant 'hurting.' On the meaning of the rt.  $\theta\epsilon\rho$  cp. Heinr. Schmidt 'Synon.' ii. 301 ff. (2) *for-mu-s* he traces to the stem of *fervēre* discussed above; (3) the Goth. *var-m-s* to *var*, the root of the ChSl. *var-i-ti* 'boil.' This is phonetically possible, but this root is, according to Fick i<sup>3</sup>. 213, represented in Teutonic by the OHG. *wal-m* 'heat.' I leave others to decide whether there are analogies in Teutonic languages for the loss of a *g* before *v* which we must assume if we want to connect *ghar* and (*g*)*var*. (4) the Slavo-Lettish words, which the 'Pet. Dict.' also connects with our present root, he refers to the rt. *gvar*, to which belong the Skt. *ḡvarā-s* 'glow,' *ḡvāl-a-ti* 'he glows;' while (5) with the Skt. *ghar-mā-s* he connects Hesychius'  $\chi\lambda\epsilon\mu\epsilon\text{-}\rho\acute{o}\text{-}\varsigma$  ( $\chi\lambda\epsilon\mu\epsilon\rho\acute{o}\nu$   $\chi\lambda\iota\alpha\rho\acute{o}\nu$ ,  $\theta\epsilon\rho\mu\acute{o}\nu$ ). Though it is extraordinary to find  $\theta$  as the representative of *gh*, I cannot get over the fact that we find the stem *ghar-ma*, sometimes as a substantive, sometimes as an adjective in six families of languages in an absolutely similar use. — Perhaps we may also connect the OIr. *gorm* 'dark' ('red,' 'blue'), Cymr. *gurm* 'dusky,' with the Skt. *gharmā-s*. Stokes 'Corm. Transl.' p. 85 adds also the Ir. *gronn*, *gorn* 'firebrand,' and further (after Siegfried 'Miscell. Celt.' p. 10), the OGall. Apollini *Granno*, cp. the Skt. *ghṛnā-s*, *ghṛnī-s* 'heat,' 'sunshine;' the same root occurs probably in the OIr. *grían* gen. *gréne* 'sun.' The Ir. *sornd* 'oven' is *fornus* borrowed.

If we were right in comparing at p. 482  $\epsilon\lambda\alpha\phi\rho\acute{o}\text{-}\varsigma$  with 495  $\epsilon\lambda\alpha\chi\acute{o}\varsigma$  (No. 168) we should have in the  $\epsilon\lambda\alpha\theta\rho\acute{o}\varsigma$  there mentioned an example of a dialectic  $\theta = gh$ . The variation between  $\chi$  and  $\theta$  in the Dor.  $\acute{o}\rho\nu\acute{\iota}\text{-}\chi$  by the side "nary Greek  $\acute{o}\rho\nu\acute{\iota}\text{-}\theta$  and the shorter  $\acute{o}\rho\nu\acute{\iota}$  (acc.  $\acute{o}\rho\nu\acute{\iota}\text{-}$  as

yet unexplained. It seems, however, to me to be not improbable that the Dor.  $\chi$  is connected with the  $\chi$  of the Boeot. diminutives in  $-\iota\chi\omicron-s$  and bears just the same relation to this fuller form that the  $-\nu\theta$  of the stems  $\acute{\epsilon}\lambda\mu\iota-\nu\theta$ ,  $\tau\iota\rho\nu-\nu\theta$  bears to formations like  $\acute{K}\acute{\omicron}\rho-\iota-\nu\theta\omicron-s$ ,  $\mu\acute{\iota}\nu\nu-\nu\theta\alpha$  (Pott 'Personennamen' 451), of which the latter (cp.  $\mu\acute{\iota}\nu\nu\theta\acute{\alpha}\delta\iota\omicron-s$ ) is especially applicable to the case in point. We may, I think, regard these suffixes as diminutive, and compare the  $\chi$  with the often recurring diminutive  $\kappa$ , and the  $\theta$  with the  $t$  that serves the same purpose in the related languages. Compare  $\mu\acute{\iota}\kappa\acute{\upsilon}-\theta\iota-\nu\omicron-\nu$   $\tau\acute{\omicron}$   $\mu\acute{\iota}\kappa\rho\delta\nu$  καὶ νήπιον Hesych. As an example of a Gk. diminutive formation in  $\tau$  we have  $\nu\eta-\pi\acute{\upsilon}-\tau\iota-\omicron-s$  (cp. p. 471) from  $\nu\acute{\eta}\pi\iota\omicron-s$ , and much the same in  $\tau\acute{\upsilon}\tau\theta\omicron-\nu$  which is most probably like  $\tau\upsilon\nu\acute{\nu}\acute{\omicron}-s$ ,  $\tau\upsilon\nu\nu-\omicron\upsilon\tau\omicron-s$  a diminutive from the demonstrative st.  $\tau\omicron$ . The Boeotians moreover aspirate an original  $\tau$  in the personal terminations  $-\nu\theta\iota$ ,  $-\nu\theta\omega$ ,  $-\nu\theta\omicron$ ,  $-\nu\theta\alpha\iota$ . — In modern Greek, as Baumeister 'Euboea' p. 57 shows, now and then  $\theta$  takes the place of  $\chi$ , e. g. in  $\Lambda\iota\theta\alpha\delta\acute{\omicron}-\nu\eta\sigma\alpha = \Lambda\iota\chi\acute{\alpha}\delta\epsilon\varsigma$ , though we also find  $\chi$  for  $\theta$ , if  $\tilde{\eta}\rho\chi\alpha$  from the Greek of Ceos is really identical with  $\tilde{\eta}\lambda\theta\omicron\nu$ , and is not to be regarded as nearer to  $\acute{\epsilon}\rho\chi\omicron\mu\alpha\iota$ . — Bezzenberger's bold assumptions ('Beitr.' ii. 190 f.) as to the substitution of a  $\theta$  for  $\phi$  and  $\chi$  I cannot adopt.

#### d.

All that can be adduced in support of the change of original labials to dentals is untrustworthy. — That  $\tau$  is ever the representative of an original  $p$  has hardly been maintained at all. The only case that looks at all like it is that of the Greek for peacock  $\tau\alpha\acute{\omega}-s$  or  $\tau\alpha\acute{\omega}\nu$  (so according to Athen. ix. 397 e), compared with the Lat. *pavo* (st. *pavōn*). But after what Pott ii<sup>1</sup>. 443, Benf. ii. 236, the 'Thesaurus' of Stephanus and Vaníček 'Fremdwörter' p. 55 have told us about this word it seems impossible to doubt that the word is no native, and that there is nothing to show that the Lat. *p* is older than the Greek  $\tau$ . — The Doric form  $\acute{\omicron}\delta\epsilon\lambda\acute{\omicron}-s$  by the side of  $\acute{\omicron}\beta\epsilon\lambda\acute{\omicron}-s$  in ordinary Greek has already come before us at p. 483, and we found no warrant for regarding the latter as the earlier form. — It is



less unusual to find  $\phi$  and  $\theta$  confronting each other from different dialects. The cases in which it appears that the dental aspirate is the older one have been discussed above. The converse of this relation occurs in  $\delta\theta\rho\nu$ -s, which has already been connected with  $\phi\phi\rho\nu$ -s under No. 405. We find the word given not only as the name of a mountain, but also as an appellative: Hesych.  $\delta\theta\rho\nu$ ·  $\text{Κρήτες τὸ ὄρος}$ , to which 496 belongs the adj.  $\delta\theta\rho\nu\acute{o}\epsilon\nu$ ·  $\text{τραχύ, ὑλῶδες, δασύ, κρημνῶδες}$ . Since  $\phi\phi\rho\nu$ -s is often used for the 'brink of a precipice,' 'high ground,' and  $\text{Ἰλίου ὄφρυέσσα}$  X 411 occurs in the sense of  $\kappa\rho\eta\mu\nu\acute{\omega}\delta\epsilon\varsigma$  which is given as the equivalent of  $\delta\theta\rho\nu\acute{o}\epsilon\nu$ , there can be no doubt as to the identity of the words. The Spartan  $\text{'Οθρυάδας}$  very likely belongs here, with the meaning 'superciliosus,' forming a parallel to the comic  $\text{ὄφρυανασπασίδης}$ , perhaps too — though this is doubtful — the Homeric  $\text{'Οθρυονεύς}$  (N 363 ff.). —  $\text{θύλλα}$  ( $\text{κλάδους ἢ φύλλα ἢ ἐορτὴ 'Αφροδίτης}$  Hesych.) is held by M. Schmidt, though doubtfully, to be the Cretan form of  $\text{φύλλα}$ <sup>1</sup>, in which at No. 418 we recognized the labial initial as belonging to the original root. — The word  $\text{θυλλί-s}$  (by-form  $\text{θυλί-s}$ ) 'bag,' also preserved by Hesych. along with  $\text{θύλ-ακο-s}$  of similar meaning, I have ventured ('Ztschr.' ii. 399) to compare with the Lat. *folli-s* 'bag,' 'bladder.' If it is right to compare the Goth. *balg-s*, which agrees precisely in meaning, and is compared with *folli-s* by J. Grimm 'Gesch.' i. 398, we shall have to start with the initial *bh* and derive the dental Greek aspirate from the labial, especially as the latter is also supported by the OIr. *bole* 'uter,' 'saccus' ('*bulgas* Galli sacculos scorteos appellat,' Festus; Z<sup>2</sup>. 14, Diefenbach 'Wtb.' i. 270 f.). The *v* of the Greek words seems to have arisen from *a*, for we find in Hesych. the by-form  $\text{θαλλί-s}$ . The double *l* has most likely arisen from the assimilation of some suffix or other. On the other hand  $\text{θύλακο-s}$  has been expanded by the addition of a suffix of some kind (cp.  $\text{φάρμακο-v, ὄστρακο-v}$ ). Cp. Pott W. i. 264. — There is more doubt about Pott's conjecture (i<sup>1</sup>. 27) of the identity of the  $\theta$  in the stem  $\text{κορυθ}$  ( $\text{κόρυ-s}$  'helmet')

<sup>1</sup> A justification of his doubt is furnished by the OGall.  $\text{πεμπέ-δουλα}$  for  $\text{πεντά-φυλλον}$  in Dioscorides ('Gr. Celt.<sup>2</sup>' p. 371, cp. 37), Ir. *duillen* 'folium,' 'Ir. Gl.' 765, *dulebad* 'foliage,' 'Corm. Transl.' p. 58, Cymr. *deil* 'folia,' *dalen* 'folium' Z<sup>2</sup>. 295.



At the first glance the identity of these words seems evident to any one from the complete identity of meaning, and the (apparently) almost entire agreement in sound. But I have maintained above, not without the most cogent reasons, and following the example of Schleicher ('Zeitschr.' iv. 399 [cp. 'Comp.' p. 206]) and, as Pott W. i. 992 informs me, of Windischmann before him, that Gk.  $\theta\epsilon\acute{o}\varsigma$  is quite distinct from the words that come from rt.  $\delta\iota\varsigma$  'shine.' I will however go into the question here with more precision, because of the importance of the word, and because of some new points of view, which have been recently suggested.

In the first place, to get a clear view of the relations of the vowels, the Skt.  $dēvā\text{-}s$  evidently goes back to  $dai\text{-}vas$ . From this we arrive, it is true, at the Ital.  $deivo\text{-}s$ , and from  
 514 this again at  $*dēu\text{-}s$ ,  $dēu\text{-}s$  (Corssen i<sup>2</sup>. 381), but the vowel of the stem-syllable in  $\theta\epsilon\acute{o}\varsigma$  of itself creates difficulties. In the numerous derivatives there is not a single trace<sup>1</sup> of the diphthong  $ei$ , which we expect as the representative of the Skt.  $\bar{e}$  and of the Osc.  $ei$  ( $deivai = deae$ ). To prove a trace of the  $f$ , forms like  $\theta\epsilon\upsilon\text{-}\gamma\upsilon\iota\text{-}s$ ,  $\theta\epsilon\upsilon\text{-}\delta\omicron\tau\omicron\text{-}s$  in certain branches of Doric have been appealed to, but it results from Ahrens' discussion of these forms ('Dor.' 215), that  $\epsilon\upsilon$  is here contracted from  $ei$ . Still less can anything be proved by the form  $\theta\epsilon\upsilon\text{-}s$ , the only certain instance of which is in Callimach. 'Hymn. in Cer.' 58 ( $\gamma\epsilon\acute{\iota}\nu\alpha\tau\omicron\ \delta' \acute{\alpha}\ \theta\epsilon\upsilon\varsigma$ ). Instead of the corresponding accusative  $\theta\epsilon\upsilon\nu$  v. 130 Meineke and O. Schneider, with good MSS. have taken into their text  $\theta\epsilon\acute{o}\nu$ . This form is naturally also contracted, and there is a very easy solution of the objection which Sanneg raises against it in his doctoral dissertation 'De vocabulorum compositione Graeca' (Halis 1865) p. 14, to

<sup>1</sup> It is true that on late inscriptions  $\theta\epsilon\iota\omicron\varsigma$  occurs for  $\theta\epsilon\acute{o}\varsigma$ , but K. Keil, who discusses the question 'Zur Sylloge inscript. Boeotic.' Supplementb. iv. to Jahn's 'Jahrb.' p. 615, shows that we have to do here with times and districts, which occasionally supply us  $\iota\epsilon\pi\epsilon\iota\omega\text{N}$  for  $\iota\epsilon\pi\acute{\epsilon}\omega\text{N}$ ,  $\text{ATEIAEIAN}$  for  $\acute{\alpha}\tau\epsilon\lambda\epsilon\iota\alpha\text{N}$ , and the like. Forms of this kind therefore belong to that period of the Greek language, in which  $e$  and  $\acute{e}$  begin to be confused, and in which undoubtedly  $E\iota$  was pronounced like  $\acute{e}$ . It would be a defiance of all critical principles to choose to employ such examples to explain any Greek etymologies.

the effect that a form *θεύς* contracted from *θεός* would be necessarily oxytone. For Herodian, the master of prosody, *περὶ μονήρους λέξεως* p. 6. 8 expressly ascribes this accent to the word: *τὸ δὲ θεὺς ἐκ συναλοιφῆς ἐστὶ ποιητικόν*. Hence O. Schneider with the best MSS. actually writes *θεύς*. Voretzsch 'De inscriptione Cretensi' (Halis 1862) appeals to the proper name *Θευόδοτος*. But this name is found, not as V. says 'in nummo Apollonopolitarum,' but in an inscription of thanksgiving set up by a Jew of Apollonopolis at a late date, and the editor, Letronne ('Revue de Philologie' tome i. 304, 1845) even regards it as possible that the reading is incorrect. What can be the value of such a late scrawl, which is put out of the question simply by its date, in the case of a word, which is transmitted to us a thousand times from all dialects? If the writer did write so at all, he confused *Θεύδοτος* and *Θεόδοτος*. At the first glance more weight seems due to a form, which has been quoted by the same scholar from Cretan coins, and has been regarded by others as a certain proof that between the two vowels of *θεός* a *F* once existed. There are two coins of Gortys, both preserved in Paris, described by Monnet 'Description de méd. antiques' vol. ii. p. 280, Nos. 179 and 185, with the legend *ΓΟΡΤΥΝΙΩΝ ΘΙΒΟΣ*. But the second<sup>515</sup> of these is regarded by authorities on numismatics as decidedly spurious, and hence we cannot take it into consideration. The first, No. 179, is regarded as genuine, but as 'tolerably late' if only from the character of the letters, especially from the *Σ*; it has upon it the figure of Herakles with . . . . *ΥΝΙΩΝ ΘΙΒΟΣ* written round it in regular characters, so that the figure comes between the two words. Now Voretzsch regards it as proved that this legend meant 'God of the Gortynians.' And it is true that it would agree phonetically with what we know of the peculiarities of the Cretan dialect to regard *ι* here as representing an *ε*, *β* a *F* (cp. *ἀβέλιος*, *Βολοέντιοι* — *Ἀρια*, *τίριος*), so that it might almost seem as though the form *\*θεφό-s* were proved. Even the circumstance that this common word occurs elsewhere in Cretan inscriptions only in the form *θεός*, and in *θιός* (*Κρητες*), does not carry much weight with



altogether will have to be fully examined below. It is from this  $\delta$  that we naturally arrive after a  $\pi$  at  $\tau$ . This explanation is confirmed at all events by one case in which we have actual record of the intermediate  $pp$ , i. e. the Lith. *spidūju* by the side of *πτύω*, discussed under No. 382, which led us to deduce a form *σπῖν-ju*. To these three examples a few others may be added. — *πτέρνα* 'heel' corresponds to the Goth. *faīrznā* of like meaning, Skt. *pārshni-s*, ChSl. *plesna* 'planta pedis' (Fick i<sup>3</sup>. 673). — *πίσσω*<sup>1</sup> (*πισάνη*, *πίσι-s*, *πισμό-s*) 'pound,' 'bruise' claims connexion with the Lat. *pins-o*, *pins-io*, *pis-tor* of like meaning and the Skt. *pish* (*pināsh-mi*), ChSl. *pŭš-eno* *дѣлѣтон*, ON. *fis* 'chaff,' so that it looks as if the root was *pis*. The only obstacle is in *πίτ-υρο-ν* 'bran,' with its strange  $\tau$ , which Pott W. ii. 2, 433, explains by supposing a metathesis from *πι(σ)-υρο-ν*. If as I have maintained at length in the 'Gk. Verb' p. 241 f., *πιέζω* 'press' belongs to this root it must be an expansion of the unaltered rt. *pis* with the regular loss of the  $\sigma$  (\**πισ-εζω*). — Whether *πτύ-ο-ν* 'winnowing fan' (Att. *πτέ-ο-ν*, probably for *πτεφ-ο-ν*), belongs, as Pictet ii. 117 and Benfey conjecture, to the Skt. *pū* 'cleanse' (whence comes *pāvana-m* 'sieve'), I cannot decide, especially as it would be possible to connect it with *πτύω*. — But the Cyprian *ἐπτόκασεν*, i. e. *ἐπύκασεν*, both interpreted by *ἐκάλυψεν* in the sense of 'implicavit' (Mor. Schmidt 'Ztschr.' ix. 367), can hardly be explained except by the supposition of this insertion. It seemed tolerably probable that the rt. *πυκ* with the meaning 'make firm' underlay the words collected under No. 384. Again *πτύσσειν* 'fold,' — and folding is a kind of making firm or secure, — is most probably related in spite of 499 its  $\chi$  (*πτυχή*). Otherwise Fröhde in Bezzenb. 'Beitr.' i. 251.

It cannot be proved that *κτ* comes from *κ* in the same manner. It is true that *κτείνω* seems to bear to *καίνω* (No. 77 b) a relation similar to that of *πτόλις* to *πόλις*. But the form with a simple *κ* is so much later, and of such rare occurrence, that we cannot venture to regard it as the primary

<sup>1</sup> The present *πίττω* to which weight is attached by Ascoli 'Krit. Stud.' 356, has no sufficient authority. Cp. Lobeck 'Paralip.' 31, Meineke 'Comici' ii. 345 f.



form. Neither can I adduce any proof of the growth of  $\gamma\delta$  from  $\gamma$ . On the other hand it is possible that the  $\delta$  in  $\beta\delta\acute{\epsilon}\omega$ , (No. 255) arose from  $j$ , since the analogies in the related languages lead us to a rt.  $hjas = \beta\delta\epsilon s$ .

But this kind of dentalism appears quite plainly in the combination  $\chi\theta$ .  $\chi\theta\acute{\epsilon}s$  (No. 193) we compared to the Skt.  $hjas$ , giving  $ghjas$  as the primary form. In this case then the  $j$  has evidently developed a dental sound, which, by the influence of the preceding aspirate, was assimilated to it. Compare with this the view of Ascoli 'Krit. Stud.' p. 323. But the same  $j$ , for which we have historical evidence in this word, may be inferred with certainty in the st.  $ghamā$ , which we recognized under No. 183 to be the primary form of the Gk.  $\chi\alpha\mu\alpha$ . If we assume with Grassmann 'Ztschr.' xii. 95, that here too a parasitic  $j$  associated itself with the  $gh$ , we arrive at  $ghjam$ ,  $ghjamā$  and thence at  $\chi\theta\omicron\nu$ ,  $\chi\theta\alpha\mu\alpha\lambda\acute{o}s$  in the very same way in which we got from  $ghjas$  to  $\chi\theta\acute{\epsilon}s$ , perhaps also at the Skt.  $ksham$ , the  $j$  having become a sibilant and the sibilant having made the soft sound before it hard. It is true that this last developement still needs closer scrutiny as a point of specially Sanskrit phonology.

In connexion with these, as I think, well established explanations, Kuhn (*ut supra*) ventures a conjecture which can hardly prove true. His opinion is that the cases of dentalism discussed above under (a) admit of this same explanation, that is, that  $\tau i-s$  presupposes a stage  $k\tau i-s$  between itself and  $ki-s$ . But such a form as  $k\tau i-s$  is not to be found in any instance, nor is there a single Greek word in which  $\kappa\tau$  degenerated into  $\tau$ . The word  $\tau\acute{\iota}\pi\omicron-s$  quoted by Kuhn has certainly nothing to do with  $\kappa\tau\acute{\iota}\pi\omicron-s$ ; it appeared probable rather (No. 249) that the root of the former was *stup*. On the other hand the shifting of a guttural to a palatal and then on to a dental is much simpler and has plenty of analogies to support it. There would thus be no need of a  $\tau$  developed by the side of the  $\kappa$ , in order to shift it into the class of the dentals. — Still less trust can be placed in the combinations of Ebel, who actually conjectures *pt* as a stage between *k* and *t*, that is, assumes  $\pi\tau i s$ , and  $\pi\tau\epsilon$ . In this he is clearly wrong, for the only opportunity 500 for *k* to develop into *p* was when a *v* introduced itself after the

*k*. We shall have to hold fast to the belief that *k* became on one side *kv* and then *p*, on the other *kj* and then *τ*.

### 3. ASPIRATION.

As we have seen that a great part of the phenomena of labialism and dentalism may be explained simply by assuming that a spirant was naturally appended to the explosive, we cannot be surprised to find that a still less articulate spirant, the simple spiritus asper, is attached in the same way, and that thus the original tenuis is changed into the corresponding aspirate. Indeed the change from the tenuis to the aspirate is one of the most common assumptions of etymologists. And this assumption certainly has in its favour the fact that we can prove the tendency to aspiration in the most various languages and periods of speech. Thus the Sanskrit hard aspirate has unmistakeably, at any rate in many cases, come from the tenuis (Grassmann 'Ztschr.' xii. 101). So too a part of the Teutonic shifting of the mutes, the change from *k* into *h*, from *t* into *th*, from *p* into *f*, rests upon aspiration, and this is partially repeated afterwards, at a later stage of the language. In Umbrian it is a recognized fact with certain combinations of sound (Aufr. u. Kirchh. i. 78); in the Persian languages this is especially the case before continuous sounds (Bopp 'Vgl. Gr.' i<sup>2</sup>. 69); in Ossetic (ib. 120) it is found widely prevalent, without any influence of the kind; in Old Irish it is most common between vowels (Schleicher 'Comp.<sup>3</sup>' 279). We are therefore already predisposed to assume the existence of this same phenomenon in Greek; and at any rate this has more analogies in its favour than the loss of the aspiration. But it is precisely assumptions which seem so unexceptionable which require especial caution. The Greek aspirates have, at least in the great majority of instances, come from soft aspirates, and hence in their origin they are far removed from the tenses; so that we must be very careful not to confuse these two groups of sounds with each other. The aspiration of a tenuis is generally to be regarded as an affection which makes its appearance on Greek soil at a comparatively late date, and which at least in many instances is brought about by the influence of neighbouring sounds: though,



starting from this point, and in part limited to certain dialects 501 and stages of the language, it does extend itself further, and in some few instances coincides with Sanskrit aspiration. The whole phenomenon has already been discussed by me in a comprehensive survey in 'Tempora und Modi' p. 196 f. Cp. Leo Meyer i. 51 and W. H. Roscher 'De aspiratione vulgari,' 'Studien' i. 2. 63 ff. This subject has been very carefully treated by Wilhelm von der Mühl in his doctoral dissertation 'Ueber die Aspiration der Tenuis vor Nasalen und Liquidis im Zend und Griechischen' Leipz. 1875. I borrow from this discussion various details, without entering upon the physiological explanation, which in this paper has often been attempted, as it seems to me, with success.

It is best to start with those changes of sound which are specifically Greek. These as a rule lie outside the limits of our task, but here they cannot be passed over without disadvantage. Christ in his 'Lautlehre' p. 104 f. has collected only a small part of the facts which belong here; and even these are mixed up with much that is dubious. The aspirate is developed from the corresponding tenuis under two main conditions, i. e. first by the influence of a following liquid or nasal, and secondly by the influence of a preceding sibilant.

The operation of the first influence is the more familiar. Thus the stem  $\beta\lambda\alpha\kappa$  (=  $\mu\alpha\lambda-\alpha\kappa$  No. 457) appears aspirated in  $\beta\lambda\eta\chi-\rho\acute{o}-s$ ,  $\acute{\alpha}-\beta\lambda\eta\chi-\rho\acute{o}-s$ , the stem  $\lambda\epsilon\kappa$  (cp.  $\lambda\iota\kappa\rho\iota\phi\acute{\iota}s$ , where the  $\phi$  prevents the aspiration) in  $\lambda\acute{\epsilon}\chi-\rho\iota\omicron-s$  (No. 540), the stem  $\tau\rho\iota$  (No. 246) in  $\theta\rho\acute{\iota}\nu\alpha\xi$  'trident' by the side of  $\tau\rho\acute{\iota}\nu\alpha\xi$ : the suffix  $-\tau\rho\omicron$  ( $\acute{\alpha}\rho\omicron-\tau\rho\omicron-\nu=ara-tru-m$ ) sometimes becomes  $-\theta\rho\omicron$  ( $\kappa\lambda\epsilon\iota-\theta\rho\omicron-\nu=claus-tru-m$ , 'De nom. form.' p. 38),  $\pi\epsilon\nu-\iota-\chi\rho\acute{o}-s$  may be compared in its suffix with  $lud-i-cru-s$  (Leo Meyer 'Vgl. Gr.' ii. 506).—By the side of  $\tau\rho\acute{\omicron}\nu\alpha$   $\acute{\alpha}\gamma\acute{\alpha}\lambda\mu\alpha\tau\alpha$   $\eta$   $\acute{\rho}\acute{\alpha}\mu\mu\alpha\tau\alpha$   $\acute{\alpha}\nu\theta\iota\nu\alpha$  (Hes. see above at No. 239) we find the Homeric  $\theta\rho\acute{\omicron}\nu\alpha$  X 441,  $\acute{\epsilon}\nu$   $\delta\grave{\epsilon}$   $\theta\rho\acute{\omicron}\nu\alpha$   $\pi\omicron\iota\kappa\acute{\iota}\lambda'$   $\acute{\epsilon}\pi\alpha\sigma\sigma\epsilon\nu$ ; (Hesych.  $\acute{\alpha}\nu\theta\eta$   $\kappa\alpha\acute{\iota}$   $\tau\grave{\alpha}$   $\acute{\epsilon}\kappa$   $\chi\rho\omega\mu\acute{\alpha}\tau\omega\nu$   $\pi\omicron\iota\kappa\acute{\iota}\lambda\mu\alpha\tau\alpha$ ). The same word occurs also in Alexandrian writers in the sense of  $\phi\acute{\alpha}\rho\mu\alpha\kappa\alpha$  'herbs,' and may certainly be compared with Skt.  $t\acute{r}\eta\alpha-s$  'grass,' 'herb,' 'stalk,' Goth.  $thaurnu-s$ , ChSl.  $tr\check{u}n\check{u}$  'thorn.' Cp. Wistmann 'Rhein. Mus.' xxiii. 238, where  $\pi\omicron\iota\kappa\iota\lambda\acute{o}-\theta$  pithet of Aphrodite is well derived from this  $\nu$  is

identical with *τρυγονᾶν* 'to knock gently at the door;' the preposition *πρό*, like the Persian *fra*, has aspirated its labial in the post-Homeric forms *φροῦδο-ς* (No. 281, cp. *πρὸ ὁδοῦ ἐγέ- νοντο* Δ 382), *φροίμιο-ν* sporadically from the time of Aeschylus beside *προ-οίμιο-ν*, *φρουρό-ς*, *φρουρά* (No. 501) have all aspirated their labial. — Also in *τέφ-ρο-ς* 'ashen grey,' *τέφ-ρα* 'ashes' the aspirate is explained from the influence of the *ρ*,  
 502 for we cannot doubt that these words are akin to Skt. *tap* 'to be warm,' 'to warm,' *táp-as* 'heat,' Lat. *tep-eo*, *tep-idu-s*, AS. *thef-jan*, 'aestuate,' OHG. *damf* 'smoke,' 'vapour,' ChSl. *top-lŭ* 'warm.' The same root experiences the same affection in the OPers. *taf-e-dhra* 'a melting,' *taf-nu* 'heat.' — Before *λ* we find *κ* aspirated in *ἀνδράχ-λη* from the st. *ἀνθρακ* (*ἀνθραξ* 'coal'), *τ* in *ναῦ-σθλο-ν* (No. 430), *ναυ-σθλό-ω*, which must certainly be referred to *ναυ-στολο-ν*, and in the suffix *-θλο* (*θέμε-θλο-ν*), which we cannot separate from *-θρο*, *-τρο* (cp. *θύρε-τρο-ν*), *π* in *σιφλό-ς*, 'misshapen,' 'weak,' if we are right in identifying it with *σιπα-λό-ς* quoted by the grammarians with similar meanings (Lobeck 'Prolegg.' 140, 'El.' i. 225). Fick i<sup>3</sup>. 474 attractively compares *ἀχ-λύ-ς* 'darkness,' 'mist,' with *ἄκαρο-ν τυφλόν* Hesych. and Lat. *aquila-s* 'dusky' ('color subfuscus' Paul. 'Epit.' 22), to which are added *aquila* and *Aquilo*. Whether *ἄγχρας μύωψ Λοκροί* belongs here seems to me doubtful, for it might easily be connected with *ἀγχοῦ*. — Aspiration before *ν* meets us in *ἀράχ-νη* from rt. *ἀρκ* (No. 489), *λύχ-νο-ς* from rt. *λυκ* (No. 88) in the diminutives in *-ιχνη*, *-ιχνιο-ν*, *-υχνιο-ν*, which go back to the shorter *κ* (*κύλιξ κυλίχνη*, *πελίκη πελίχνη*, *πόλις πολί-χνιο-ν*, cp. Schwabe 'De deminutivis' pp. 63, 73), in *πέταχνο-ν*, with the older form *πέτακνον* still preserved, explained in Hesych. by *ποτήριον ἐκπέταλον*, in *μυσαχνό-ς*, *μόλυχνο-ς* (Hesych.) for which we may conjecture similar suffixes, in *ἔχ-νος*, if we were right in referring this to the rt. *ῥικ* (No. 17), in *τέχ-νη*, the root of which (No. 235) offers however other aspirated forms, in *πάθνη* (Roscher 'Stud.' i. 2, 102), the true Attic form of which is *φάτ-νη* 'crib,' with transposed aspiration, but which we must still refer to *πατ-έο-μαι* (No. 350), in *ἄφνω*, *ἐξ-αίφνης* by the side of *ἐξαπίνης* with epenthesis of an iota (p. 668). *ἄχ-νη* 'chaff,' 'foam' is connected by Fick i<sup>3</sup>. 475 with the Goth. *ahana* (f.) 'chaff.' Whether we should take *ἀκ* 'pierce'



(No. 2) as the root, and add *ἄκ-ανο-s* 'goad' with other words, is less certain to me. — *χνοῦs* 'dust,' 'foam,' which Lobeck 'Rhemat.' 29 and Pott W. i. 673 connect with *κνάω*, *κόνι-s* (cf. *cini-s*) is doubtful. For the ON. *gnu-a* 'scrape,' 'rub away' points to a rt. *ghnu* (Fick i<sup>3</sup>. 585), to which *χνυ* regularly corresponds. And for *κόνι-s* (*ut supra* 518) the Skt. *κῆνα-s* 'corn,' 'meal' is important. — Before *μ* the *κ* of the rt. *πλεκ* (No. 103) is aspirated in *πλοχ-μός-s*, the original *κ* of the root of *πράσσω* (No. 358) in *πρῆχ-μα* in an inscription from Chios (Cauer 'Delectus' No. 133), the *κ* of the rt. *ἄκ* (No. 2) in *ἄκ-αχ-μένο-s* and in *αἶχ-μή*; the latter word however is probably for *ἄκ-ιμη*, and, like *τέφρα* quoted above, is to be taken as an adjective which has become a substantive. *ἰωχ-μός-s* 'din of battle' is equivalent to *ἰωκή*; *λαχ-μός-s* is given from Antimachus in the 'E. M.' in the meaning *λακτισμός*, and hence 503 belongs to No. 534.

The 'aspirating influence' of a preceding *s* on a following tenuis has been investigated comprehensively by Kuhn in vols. iii. and iv. of his 'Zeitschrift,' in a series of papers, which we have repeatedly used already. (Cp. Grassmann 'Ztschr.' xii. 96. An admirable attempt to explain this phenomenon physiologically is made by Ascoli 'Fonol.' 194, 'Lautl.' 164.) Within the limits of Greek the following words are certain examples of such an affection, which becomes general partly only in the Attic period, partly in still later stages of the language, and which is proved by the occurrence of unaspirated by-forms: *σχάζω*<sup>1</sup>, *σχέδ-os*, *σχεδ-ία*, *σχενδύλη* with rt. *σκεδ* No. 294, *σχίζω* with rt. *скиδ* No. 295, *σχελís* 'leg,' Attic by the side of *σκελís* and *σκέλος*, *σκέραφο-s* 'insult,' with *σκέραφο-s*, *ἀσφάλαξ* quoted in the 'E. M.' as a by-form of *ἀσπάλαξ* (No. 106), *ἀσφάραγο-s* 'asparagus' by the side of *ἀσπάραγο-s* = Zd. *sparegha* 'prong' (ModPers. *a-sparag* Justi 302), Lith. *spurga-s* (Nesselm.) 'shoot,' 'eye' ('bud') of a tree (Fick i<sup>3</sup>. 833),

<sup>1</sup> To *σχάζω* we added also the intrans. *χάζω* 'separate myself,' 'retire.' Cp. *συχάσαι συχωρήσαι* Hesych. Along with this go the Homeric aor. *κεκάδ-o-ντο* = *ἐχάσαντο* which has preserved the tenuis, and the pluperf. *ἐ-κεκήδ-ει* *ὑπεκεχωρήκει* (Hesych.) which is probably wrongly challenged by Mor. Schmidt, together with the Lat. *cē-do* (cp. Buttm. 'A. Gr.' ii<sup>2</sup>. 322).

a word possibly borrowed from the Persian, *λίσφο-s* (No. 544) with *λίσπο-s*, where *π*, if we explained it rightly on p. 367, can only claim relative priority, as is true also of the late *σφόγγο-s* and the Attic *σπόγγο-s* (No. 575), but Attic *σφυρά-s* 'dung' with Ion. *σπυρά-s* and *σπύραθο-s*, *σφυρί-s* 'basket' in Hippocrates and in a late inscription (Steph. 'Thes.') with *σπυρί-s* (cp. Lat. *spor-ta*, *σπείρα*, *σπάρα*, Lith. *spar-ta-s* 'band' Fick i<sup>3</sup>. 832), *σφονδύλη* the name of an insect in Aristotle with the variant *σπονδύλη*. So too *σφόνδυλος* 'turning,' 'joint,' with the variant *σπόνδυλος* (cp. Bonitz 'Ind. Aristotelicus'). — At an earlier period this same phenomenon made its appearance in the rt. *σφαδ* (No. 296), with which we compared Skt. *spand*, in *σφήξ* (No. 580), if we were right in regarding the *σφ* of this word as equivalent to the *sp* of *vespa*, perhaps in *σφήν* 'wedge,' if Kuhn 'Ztschr.' iv. 15 is right in connecting this with the German *Spahn* 'chip,' 'splinter' (Pott W. i. 635). The same is probably the case with *σθέν-ω* 'am strong' and *σθένος* 'strength' with its derivatives (*σθεν-αρό-s*, *σθέν-ιο-s*, *Σθέν-ελο-s*). For as we see that from the rt. *στα* (Nos. 216, 228) various forms (cp. also No. 222) are derived with the meaning of firmness, we may probably assume for these too the same  
 504 notion of 'standing' as their basis, and thus we gain for *σθέν-ος* the fundamental notion of 'stable strength,' as distinguished from *ρώμη* (No. 517) 'strength of impetus.' According to this view Greek coincides in the case of this root with Sanskrit, which shows throughout the aspirated from *sthā*. — The *θ* of *θάμβ-os* beside *τάφο-s* we explained under No. 233 from the influence of the *σ* subsequently lost (rt. *stabh*, Gk. *θαφ*). The aspiration also corresponds in the two languages in the case of the rt. *sphal*=Gk. *σφαλ* (No. 558); and also in *σφαδ* mentioned already. On the other hand in other roots and words, especially in the rt. *sthaγ*=στεγ (No. 155), in *asthí*=ὀστέον (No. 213), in *sphar*=σπαρ (No. 389) the Indian aspirate is isolated. — We must find in a sibilant once present, but afterwards lost, the source of the aspiration of *φᾱνο-s* by the side of the older *πᾱνο-s* 'torch,' if the combinations of Roscher 'Stud.' i. 2, 72 ff. are correct. He follows Kuhn in connecting these words with *σφήν* and with the German *Spahn*.

Besides these two main influences on the aspiration of a



tenuis we may conjecturally ascribe also to a *preceding* nasal a tendency in some cases to change the tenuis into the aspirate. The attempt to explain this process from the physiology of speech has been made by von der Mühl on p. 47 of the work mentioned above on p. 501. Here belong  $\xi\gamma\chi$ -os, where derivation from the rt.  $\delta\kappa$  and affinity with  $\acute{\alpha}\kappa$ -ων (No. 2) is the more probable, that in other instances also groups of consonants containing a nasal change  $\alpha$  into  $\epsilon$ ,  $\piένθος$ ,  $βένθος$ ,  $φέγγος$ ;  $κόγχη$  (No. 65), the Skt. correlate of which,  $çañkhá$ -s, shows the hard aspirate, which we assume to be almost always of later origin;  $λαγγάνω$ , if we follow Fick i<sup>3</sup>. 748 and Van. 827 in comparing the ChSl. *po-lač-iti* (by-form *po-lučiti*) Lith. *per-lenki-s* 'duty' OPruss. *per-lānk-ai* 'it is due.' The aspiration must in that case have been transferred from the forms with a nasal to  $\lambdaαχέιν$ , etc.  $\acute{\rho}\acute{\epsilon}\gamma\chi$ -ω by the side of  $\acute{\rho}\acute{\epsilon}\gamma\kappa$ -ω 'snore' and  $\acute{\rho}\acute{\upsilon}\gamma\chi$ -os, a word which, according to Athenaeus iii. 95, means  $κυρίως$  'the swine's snout,' belonging either to  $\acute{\rho}\acute{\epsilon}\gamma\kappa\epsilon\iota\nu$  or as Fröhde 'Ztschr.' xxii. 267 assumes, to  $\acute{\delta}\acute{\rho}\acute{\upsilon}\sigma\sigma\epsilon\iota\nu$ ,  $\sigma\pi\iota\nu\thetaήρ$  'spark,' which is seen to be aspirated by a comparison with its diminutive *scintilla* (otherwise Fick i<sup>3</sup>. 834),  $\tauαν$ - $\thetaαρ$ -ίζειν 'tremble,' 'dangle,' by the side of  $\tauαρ$ - $\tauαρ$ -ίζειν 'tremble with cold,' 'chatter,' certainly from the rt.  $\tau\epsilon\rho$ , the manifold expansions of which are discussed under rt.  $\tau\epsilon\rho$  No. 244,  $\acute{\delta}\mu\phi$ -ή 'voice,' if it belongs to the rt.  $\phi\epsilon\pi$  (for  $\phi\epsilon\kappa$ ) No. 620, though certainly the word in Homer does not admit the  $\phi$ . Fick compares  $\acute{\delta}\mu\phi\eta$  with the Lith. *ambiti* 'scold' (i<sup>3</sup>. 493), which is by no means self-<sup>505</sup> evident. To these we may further add the Boeotian termination of the 3 plur. in  $-\nu\theta\iota$  for  $-\nu\tau\iota$  (mentioned above p. 495), and the diminutive forms in  $\nu\theta$  there compared.—To these belongs also  $\kappaολοκύνθη$  'pumpkin,' while  $\kappaολοκύντη$  was regarded as the better, the genuinely Attic form ('Phrynichus' ed. Lobeck p. 437). We can also recognize the aspirating influence of the nasal in other isolated dialectic forms:  $\sigmaκάνθαν$   $κράββατον$ , which Salmasius compared with  $\acute{\alpha}\sigmaκάντην$ , of equivalent meaning,  $Βερέκυνθος$ , a Cretan mountain, by the side of  $Βερέκυντος$  in Phrygia.

A different explanation of the aspirate which appears by the side of a tenuis has been sought in a digamma following, and especially the combination  $\pi\phi$  is supposed to have passed

into  $\phi$ . More than any one Benfey 'Ztschr.' vii. 52 gives this explanation with great positiveness, and it is approved by Leo Meyer i. 51. The former refers  $\beta\lambda\epsilon\phi\text{-}\alpha\rho\omicron\text{-}\nu$  to  $\beta\lambda\epsilon\pi\text{-}\text{F}\alpha\rho\omicron\text{-}\nu$ ,  $\sigma\phi\text{-}\delta\text{-}s$  (No. 628) to  $\sigma\pi\text{-}\text{F}\omicron\text{-}s$ . But the assumed form with a  $v$  does not, either in this case or in any other of the instances discussed by him, actually occur in any of the kindred languages. There is certainly in Sanskrit a suffix  $-vara$ , which is used occasionally for primary nominal formation (Lindner p. 109), and more numerous analogies may also be quoted (ib. 105) for the suffix  $-Fo$ , e. g.  $\acute{u}rdh\text{-}v\acute{a}\text{-}s$  'straight,'  $tak\text{-}v\acute{a}\text{-}s$  'quick' (cp.  $caed\text{-}uu\text{-}s$ ,  $cur\text{-}vu\text{-}s$  Corssen i<sup>2</sup>. 313). But we cannot speak of any special agreement. It is only where phonetic traces are to be found that this explanation becomes more probable, as in  $\delta\phi\iota\text{-}s$  (No. 627), which in Homer and Hipponax is scanned as a trochee, and hence must have been pronounced almost as  $\delta\pi\phi\iota\text{-}s$ .  $-vi$  is in Sanskrit a suffix which forms adjectives from verbal stems, occurring e. g. in  $\acute{g}\acute{a}gr\text{-}vi\text{-}s$  'watchful' (Lindner p. 109). Thus we can suppose a form  $*ak\text{-}vi\text{-}s$  'seeing,' from which  $\delta\kappa\text{-}\text{F}\iota\text{-}s$ ,  $\delta\pi\text{-}\text{F}\iota\text{-}s$  came. — I have already combated (in 'Tempora und Modi' p. 194 ff.) the view that the Greek aspirated perfect goes back to a formation corresponding to the Latin form in  $-vi$  and that so  $\pi\acute{\epsilon}\pi\lambda\epsilon\chi\text{-}\alpha$  is for  $\pi\epsilon\text{-}\pi\lambda\epsilon\kappa\text{-}\text{F}\alpha$ . I may now refer to the 'Gk. Verb' p. 403 ff. The isolated form  $\acute{\epsilon}\delta\acute{\eta}\delta\omicron\text{F}\alpha$  in the strange inscription 'C. I. N.' 15 cannot possibly determine the question. In this instance  $\text{F}$  is probably only the sign of the transition-sound, naturally developed between the  $\omicron$ , (which is to be compared with the  $\epsilon$  of  $\acute{\eta}\delta\text{-}\acute{\epsilon}\text{-}\sigma\theta\eta\text{-}\nu$ ,  $\acute{\epsilon}\delta\text{-}\acute{\eta}\delta\text{-}\epsilon\text{-}\sigma\mu\alpha\iota$ , and which recurs in the Homeric  $\acute{\epsilon}\delta\text{-}\acute{\eta}\delta\text{-}\omicron\text{-}\tau\alpha\iota$ ), and the following vowel, springing as it were from the former, like the  $v$  of the Skt.  $ba\text{-}bh\acute{u}\text{-}v\text{-}\alpha$ . This is how in Italian the name *Joannes* became *Gio-v-anni*. Cp. below p. 586. This post-  
506 Homeric phenomenon, which is parallel to the Homeric aspiration before the middle termination  $\text{-}\alpha\tau\alpha\iota$ , is evidently a purely Greek phonetic affection (cp. 'Gk. Verb' p. 418).

We shall probably be compelled to recognize a like aspiration, which cannot be explained from special conditions, in other cases besides, where it is partly of older date than in the instances hitherto discussed. In my paper on the aspirates ('Ztschr.' ii. 336) I called attention to the fact that the



Greek aspirate sometimes corresponds to the hard aspirate of Sanskrit; and I distinguished two cases, the one in which the aspirate in Sanskrit as well as in Greek is of later origin (*hysterogen*), i.e. originating in the tenuis, the other when on the contrary the aspirate is original in both, but in both is raised from the stage of the soft sound to that of the hard. We discussed these relations on pp. 82 and 422. Of course the other kindred languages, or any by-forms that may exist in the same language must decide what is the character of the sound in the particular instance. The hard aspirate of Greek and Sanskrit in the st. *δύυχ* and *nakha* (No. 447) was of the second kind. Under No. 412 we regarded the *ph* of the rt. *phull* in the same way. We should have also to add to these the agreement of the form *χά-ος* (i.e. *χα<sup>f</sup>-ος*), discussed under No. 179, with the Skt. *kha-m* 'cavity,' 'atmosphere,' an instance which Bopp 'Gl.,' and Aufrecht 'Ztschr.' ii. 148 have pointed out, and which has also been recognized by Benfey in his complete discussion of these words and of others connected with them 'Ztschr.' viii. 187 ff. The kindred languages offer no forms but such as point back to an original *gh*. Hence Skt. *kha-m* is also hardened for *gha-m*. — The Skt. *kh* is undoubtedly of the former kind in some of the words just discussed, in which, like the Greek *χ*, it arose from *k* through the influence of a sibilant; e.g. in the rt. *skhad* (No. 294); and the same is the case with Skt. *th* and *ph*, which appear under the like conditions, e.g. in rt. *sthā* by the side of *σθένος*, *sphal* by the side of *σφάλλω* (No. 558). — Elsewhere indeed we may have some doubts. It was not however without reason, that we just above placed *κόγχη*, *κόγχο-s* = Skt. *ṣaṅkhá-s* (No. 65) among the examples of aspiration originating in later times. — The word *χαλινό-s* discussed under No. 561, and compared with the Skt. *khalīna-s*, was left doubtful. — We found instances on p. 278 of *θ*, corresponding to a Sanskrit *th*, but proved by other kindred forms to be a metamorphosed *t*, in the words *πλάθ-ανο-ν*, *πλαθ-άνη* and Skt. *prath*, *prthú-s* (No. 367 b) by the side of *πλατύ-s*, *πλάτ-ανο-s* Lith. *platù-s*, and also in *μόθ-ο-s* 'turmoil' (No. 476), Skt. *manth-á-s*, ChSl. *met-a*.

On the other hand the aspirate, most commonly the labial,

507 is also found confined to Greek. Thus in the case of the rt. δεκ (No. 11) we saw above that the unaspirated form, which occurs among the Ionians, Dorians, and Aeolians (Ahrens 'Dor.' 82), is the original, the Attic δεχ a form of later origin. Even the Attic writers preserved the older κ in some words, the connexion of which with δέχεσθαι can hardly have been clearly present to the consciousness of those who used them, in δοκ-ός 'beam,' δοκ-άνη 'fork,' but also in δωροδόκος, πανδόκος with its derivatives, perhaps also in δεκῶν ὁ δεκαζόμενος and δεκάζειν 'bribe,' which is probably best explained as a frequentative of δέχεσθαι in the sense of 'to welcome to one's house,' 'to entertain,' 'to treat' (cp. ἀκουάζεσθαι, μιγάζεσθαι); the derivation from δέκα (to undertake to distribute by tens), ascribed in the 'E. M.' 254, 29 to Eratosthenes, sounds extremely wild. — The rt. τυκ preserved this, its original, form especially in the Ionic dialect (τε-τύκ-ο-ντο, Τεῦκρο-ς), as we saw on No. 235. But here too the Attic writers were not without forms with the unaspirated sound: τύκ-ο-ς, by the side of τυγχάνω, τεύχω. Who will find any particular explanation of the aspirate here? These are just the forms on which the view is especially based that the aspirated perfect arose from the unaspirated merely by phonetic affection. Perhaps the perfect-like present οἶχ-ο-μαι, characterized by the diphthong of the perfect, belongs here, a form which Sonne 'Epilegomena' p. 62 has already compared with the Goth. perfect *vaik* 'cessi,' without wishing to identify the two words. Although we cannot prove a *f* here, we may probably connect the verb with the rt. φυκ (No. 17), and the meaning 'I have given way,' 'disappeared' suits completely. The labial spirant might vanish before *o* sooner than before other vowels, as Christ p. 261 conjectures. — To these cases of aspiration belongs also the word ταχ-ύς, Skt. *táku-s*. In the 'Pet. Dict.' the Skt. adjective is explained by 'hurrying.' The root is *tak* (No. 231) 'shoot,' 'tumble,' whence *ták-van* 'bird,' and it is completely established in its high antiquity by Lith. *tek-ù* 'flow,' 'run,' *ték-ina-s* 'running fast,' ChSl. *tek-ŭ* δρόμος, tok-ŭ πνεῦμα (Bohem. *roz-tok* 'issue,' 'mouth') OIr. *techim* 'fugio.' In Zend this root is very richly represented; *tak-a* 'running,' *takh-ma*, also with aspiration, 'quick,' 'strong,' *tac*



'run,' 'flow,' *tañc-ista* (cp. *τάχ-στο-ς*) 'very strong.' Grassmann 'Ztschr.' xii. 104 justly calls attention to the fact, that the transposition of the aspiration to the beginning of the word, which we perceive in *θάσσω*, when contrasted with *τεύξομαι*, points to a high age for the internal aspiration. — We conjectured on p. 498 that *πτύσσω* belongs to the rt. *πυκ*, and that hence *πτυχή* similarly only became aspirated at a later date. — The Siceliot *κάρχαι* = *καρκίνοι* was mentioned under No. 40. — Here belongs also *ράχία* (Ion. *ρήχίη*) 'breakers' from the rt. *φρακ*, as will be seen on p. 542. The initial *χ* of *χόρ-ιο-ν* 'skin,' 'afterbirth,' corresponds to the *c* of the Latin *coriu-m*, with which Kuhn 'Ztschr.' iv. 14 justly compares it, arguing also from the Lith. *skur-d* 'skin,' 'leather' — cp. *scor-tu-m* — to an initial sibilant, which would help to explain the aspiration. Cp. No. 53, and Fick ii<sup>3</sup>. 272.

There is an example of a *θ* which has arisen from *τ* in *κλώθω*, the connexion of which with Skt. rt. *krat* 'spin' (*kr-ná-t-mi*) seemed to us probable under No. 42 a. As the formation of the Indic present points to a nasal, we may perhaps with Joh. Schmidt assume that *κλώθω* was developed directly from *\*κλονθω*, and that the aspiration was based upon the influence of a nasal, subsequently disappearing, as discussed above on p. 504.

Much more commonly does *φ* appear as against a primary *p*. It will be expedient here to distinguish cases where it is initial from those where it occurs in the middle of a word. — The derivation of *φι-άλη* from the rt. *πι* (No. 371), given even by ancient authorities ('E. M.'), has been frequently repeated in modern days, especially by Legerlotz 'Ztschr.' vii. 308, who is followed by Christ p. 186. Both refer *φιάλη* to *πιφαλη*, and take it as a proof of the theory, often repeated but utterly incapable of proof, that a digamma suppressed in one syllable, produces aspiration in the syllable antecedent. But the etymology asserted for *φιάλη* breaks down owing to the fact that the word always means in Homer, not a drinking-vessel, but a kind of kettle, which is placed upon the fire — hence *ἀπύρωτος* of one not yet used *Υ* 270 — also used as a jar for ashes (ib. 243, 253). *A*

taught this, for he added his διπλῇ to the verse first quoted for this reason, ὅτι φιάλην οὐ τὸ παρ' ἡμῶν (the Greeks of later times) ποτήριον, ἀλλὰ γένος τι λέβητος ἐκπέταλον ('Aristonicus' ed. Friedländer p. 330); compare also Döderlein 'Gloss.' 936, who refers to the agricultural expression φιαλοῦν βόθρον, to 'kettle out,' as it were, i.e. to hollow out, a ditch in a round shape. In Xenophanes Fr. 1, 3 (Bergk) φιάλη means a vessel for ointment. It is in Pindar first that we meet with οἶνοδόκος φιάλα (e.g. Isthm. 6. 40). Max Müller 'Essays' iv. tries to support the derivation from rt. *pī* by showing that Skt. *pātra-m* beside the etymological meaning of *poculu-m*, has also the wider meaning of 'vessel,' 'utensil.' But the strange thing about φιάλη is that this presumed primary meaning is completely foreign to the earliest language. — The comparison of φιαρό-*s* with Skt. *pīvará-s* 'fat,' is in no better case. Greek shows no inclination whatever to the aspiration of the π, as is shown by the forms πιαρό-*s*, πῖαρ, 509 πῖων, collected under No. 363. Besides, the meaning of φιαρό-*s*, which in the Alexandrian poets, the only writers who know the word, is an epithet of the dawn, and means always only 'shining,' 'gleaming,' has absolutely nothing to do with πιαρό-*s*, which never means anything but 'fat,' 'greasy.' In Theocr. xi. 21 the reading φιαρωτέρα ὄμφακος ὤμῃς, quoted by M. Müller, is by no means certain. — Pott's connexion (i<sup>l</sup>. 269, W. i. 1205) of φλύ-ω, φλεύ-ω in the compound περιφλύων, περιφλεύειν 'singe,' with Skt. *plush* and *prush* 'burn,' is exposed to objections of various kinds. The Skt. rt. *pru-sh* must be certainly regarded as an expansion of the shorter stems discussed under No. 378 and 385, while on No. 415 we inferred a Greek rt. φρυ, connected with Goth. *brinnan*. Lobeck 'Rhem.' 24 is inclined on the contrary to connect φλύ-ω, when referring to 'fire,' with the forms discussed under No. 412, as in fact the ideas of 'flaming fire' and of 'gushing exuberant fulness' often pass into each other in language. — On the other hand initial aspiration is well established in :

652. φῦ-σα blast, bellows, bladder, φυσά-ω blow, φυσιά-ω snort, pant, φυσαλί-*s*, φυσαλλί-*s* bladder, bubble, φύσκα bladder, blister, weal, φύσκη intestine, sausage, φύσκ-ων pot-belly.



Skt. *pupphu-sa-s* lung, *pupphu-la-s* blowing, *phu-t* blow.

Lat. *pūs-ula*, *pus-tula* blister.

Lith. *pūs-ti* blow, puff, *pus-lė* bladder.

Pott W. ii. 2, 445, Benf. i. 551 ff. — In spite of Pott's protest I start from a rt. *spu*, the *s* of which produced aspiration in Skt. and Greek, and then fell off. This rt. *spu*, Gk. *φν*, from which *φν-σί-γναθο-ς*, 'with puffed cheeks,' is immediately formed, takes an expanding *s*, which meets us also in the Latin forms. *φῦ-σα* must have come from \**φυσ-ja*, \**φυσσα* (cp. *κῦσα* beside *κίσσα*). Cp. Misteli 'Ztschr.' xix. 121. The development of meaning is simple, and almost identical with that of the German *blasen* and its belongings. As 'bladder,' 'blister' (*Blase*), and 'puff up,' 'swell' (*blähen*) are connected with 'blow' (*blasen*) in so many languages, I regard the explanation of Lat. *pūsula*, *pustula* here given, as more probable than that from the rt. *pu* (No. 383) maintained by Corssen 'Beitr.' 460. — Very differently Pictet ii. 143, who, having in view the Skt. *bhās-trā* 'bellows,' starts from a rt. *bhas*. But the *u* is too firmly attached to all the forms here quoted, and a long *u* especially is too rarely developed from an *a* in Greek, to make this explanation probable. — *ποιφύσσω* 'blow,' 'pant,' as is shown by *ποι-φνγ-μα* (Aesch.) and other forms, rests upon a root expanded by a guttural, which Pott W. i. 1123 compares with ON. *fiuka* 'vento ferri.' — The original rt. *spu* returns with metathesis in the words *ψύχω*, *ψυχή* to be mentioned on p. 702.

A  $\phi = \pi$  appears in the middle of a word in:

510

653. *ἄφ-ερος*, *ἄφ-ρος* riches, *ἄφνε-ιό-ς* rich, *ἄφν-ύ-ω*, *ἄφν-ύν-ω* (Hesych.) enrich.

Skt. *áp-nas* revenue, possession, *ápnas-vān* profitable, *apnaḥ-sthá-s* possessor.

Lat. *op-s*, *op-es*, *opu-lentu-s*, *in-ops*, *cōp-ia* (= *co-op-ia*).

The  $\epsilon$  of *ἄφeros*, as Buttmann 'Lexil.' i. 46 f. already conjectured, is no original element of the stem, for which the verb, explained in Hesych. by *ἀλβίζω*, is of especial importance (cp. *τέμ-ε-ρος*). We may consequently here ascribe to the  $\nu$  the power of aspiration, as in the instances quoted on p. 502. The Lithuanian *ápsta-s* 'crowd,' *apstù-s* 'richly' offer themselves unsought. — To the derived words belongs further *εὐ-ηφενέ-ων* (Hesych. *εὐπλουτούντων*) which Aristoph. Byz. and Rhianus read in  $\Psi$  81 for *εὐ-η-γενέ-ων*, not without reason (Nauck 'Aristoph. Byz.' p. 50), and which I. Bekker has received into his text. The proper name *Εὐηφένης* is found in a Thasian inscription published by J. Miller ('Revue Archéol.' 1865 p. 141). Th of *ἄφeros* is discussed by Aufrecht 'Ztschr.' ii. 147 f., wh

Schweizer however (Höfer's 'Ztschr.' ii. 108), in supposing *abh* to be the root. But the Skt. *abh-va-s*, from which this root is deduced, is according to the 'Pet. Diet.' a compound of *a(n)* and *rt. bhū* 'be,' with the meaning 'monstrous,' 'dismal,' in the neuter, 'monstrous size,' 'might,' which is far removed from our words. And the Gothic words *ab-r-s* *ισχυρός*, *abra-ba* *σφόδρα* with all their kin contain only the notion of strength which reminds us of *δφελ-ος*, *δφελ-ω* [Joh. Schmidt 'Ztschr.' xxii. 327]; so that we cannot, I think, allow the connexion of the words here quoted to be annulled because of them. — On the other hand there are still some Greek words with nasalization and an *o* belonging here (Pictet ii. 398), though for the most part occurring only as glosses, and therefore to be treated with caution: with an old *π* there are *ὄμπ-νη* *τροφή*, *εὐδαιμονία*, *Δημήτηρ* 'Ὀμπνία' (cp. *alma*), *ὀμπνέειν* *αὐξάνειν*, with *φ* the equivalent *ὀμφύειν*, and many more of various kinds, partly dubious derivatives. Other combinations with regard to the *rt. ap* and the words akin in 'Studien' i. 1. 261. — To the Latin word of this group Corssen 'Ital. Sprachk.' 147 wishes to add also *opī-mu-s*. — Perhaps the OIr. *áne* 'divitias' (acc. plur. *ánu*, a *u*-stem Z<sup>2</sup>. 240) belongs here.

*ἀλειφ-ω* has been discussed under the *rt. λιπ* (No. 340). It might be difficult to prove any special occasion for aspiration in this verbal form, which is shown to be primitive by its 'addition of sound,' in the noun-forms *ἄλειφ-αρ*, *ἀλοιφ-ή*.

*ἀπ-αφ-ό-ς* *ἐποψ*, Lat. *up-up-a* was mentioned under No. 336.

*ἄπτω* 'tie,' 'bind,' 'seize,' in the middle, 'seize on,' 'take part in,' *ἄφ-ή* 'tactus,' 'union,' *ἀφάσσω* 'feel' (by-form *ἀφασσάω*), *ἀπ-αφ-ίσκω* 'deceive,' show the aspirate, while *ἀπ-ήννη* 'team,' *ἡπ-ά-ο-μαι* 'mend' (*ἡπη-τή-ς*, *ἡπή-τρια*) and *ἀπ-ά-τη*, perhaps also *ἡπι-ο-ς* in the sense of 'friendly,' 'accessible,' have retained the *π* unaltered. It is impossible to decide in the case of *ἄμμα* and *ἀψί-ς* 'fastening,' 'vaulting.' Lat. *ap-ē-re* 'comprehendere vinculo' Paul. 'Ep.' 18, 511 to which belong *ap-tu-s* and *ap-i-sci*, and with which Skt. *āp* 'attain to,' 'arrive at,' is also related, contains the original final letter. Cp. Fick i<sup>3</sup>. 16 and my 'Commentatio de forma *ἐάφθη*' L. 1870. For the change of the breathing at the beginning cp. p. 687. Whether Lat. *ā-mentu-m* 'thong' belongs here has been made very doubtful by the glossematic form *admentum* established by Loewe 'Prodr.' 367 ff.

*βλέφ-αρο-ν* by the side of *rt. βλεπ* has been touched upon



on p. 505. γνίφων-ες 'niggards' and σκνιποί will have to be discussed on p. 703.

γρίφος, interchanging with γρίπο-ς, 'rush-net' — for both forms are about equally well authenticated — has no quite certain etymology. The most probable comparison, mentioned under No. 516, seems to me that given by Pott i<sup>1</sup>. 140, and also approved by Benfey i. 211, viz. with ῥίψ (gen. ῥίπ-ός) and Lat. *scirp-u-s*, OHG. *sciluf*. γ as a weakening of σκ will be discussed on p. 703. If this comparison is correct, it establishes the priority of the π and we have a new case of aspiration.

The form καφ by the side of καπ, καπ-ύ-ω has been already quoted under No. 36. Besides κε-καφ-η-ώς, the perfect κέ-κηφ-ε· τέθνηκε (properly *spiravit*) preserved by Hesych., also belongs here; Lobeck 'Rhem.' 46 well compared it with ἐγ-κάπτει, i.e. ἐκ-κάπτει· ἐκπνέι. The perfect, as the tense of completed action, expresses without the help of the preposition ἐκ, what the present-stem only succeeds in expressing by means of it.

κεφ-αλή we learnt on No. 54 to recognize as the correlate of the Skt. *kapāla-s*. In this case we may notice the medial in the dialectic forms κεβάλη, κέβλη, to which we shall recur on p. 539.

κοῦφο-ς 'light,' in the sense of *levis*, is compared by Leo Meyer (i. 51) with Skt. *kap-alā-s* (rt. *kamp*) 'moveable,' 'light-thoughted,' 'frivolous.' Hesych. furnishes the by-form κεμψός, which is explained by κοῦφος. Cp. κεμφάς· ἔλαφος. Joh. Schmidt 'Vocal.' i. 115.

κωφ-ός in its relation to rt. κοπ, and especially to Goth. *hamf-s* 'mutilated,' has been discussed under No. 68 b.

λαφ-ύσσω we found ourselves obliged at No. 536 b to place with λάπτω rt. λαπ.

πομφό-ς 'blister,' 'swelling,' πομφόλυξ 'bubble,' are well grouped by Fick i<sup>3</sup>. 661 with Skt. *pippala-s* 'berry,' 'nipple,' Lat. *papula* 'blister,' *papilla* 'nipple,' 'small swelling,' Lith. *pāpa-s* 'nipple,' 'breast.' Add also ChSl. *papŭ* 'umbilicus.' The Lith. verb *pamp-ti* 'swell out,' 'grow fat,' contains the common idea. Lat. *pamp-inu-s* 'shoot of the vine' might also belong here. Many of these words have been already quoted by Pott i<sup>1</sup>. 109, 193.

ράφύ-ς by the side of ῥάπυ-ς under No. 511.

512 *σαφ-ής* and *σοφ-ός* by the side of *sap-io* I formerly placed under No. 628, now I can only say that the two words are certainly connected (Fick i<sup>3</sup>. 993). We have a form phonetically remarkable in *ἐπίσσοφος*, the name of an office which Boeckh ('C. I.' ii. p. 371) compares with that of the *γραφεύς* or *ἀντιγραφεύς*, on the Theraic inscription C. I. G. 2448, 6, l. 30 ff. The double *σ* doubtless points to *σf*, and in any case justifies the retention of the sibilant before the vowel. From a rt. *σfaπ* we could easily explain also *σύφαξ* ('must'), *συφακίζειν* (*ὀπωρίζειν*), *ἀ-σύφ-ηλο-ς*, *Σί-συφο-ς* (cp. *Τί-τυρο-ς*, *Τι-θωνό-ς*, *μί-μο-ς*) and *σέ-συφος* *πανούργος* (Hesych). To the Lat. *sap-io* without aspiration is attached OHG. *ant-seffan* ('intellegere'), and also probably (cp. Pauli 'Ztschr.' xviii. 12) *σαπ-ρό-ς* 'rotten,' *σήπ-ειν* 'rot' (*σέ-σηπ-ε*, *σαπ-ῆ-ναι*). From the primary notion 'taste' comes both the meaning of a delicate taster, of a penetrating sense; *σοφ-ός sapiens*, *sapidu-ς*, *ant-seffan*, and also *σαφ-ής* 'tasteable,' 'recognizable,' 'clear,' and *σαπ-ρό-ς* 'smelling,' with the regular interchange between the sense of taste and that of smell. The retention of the physical primary meaning — with which we have also *sap-a* 'must,' *σύφαξ*, and OHG. *saf* (Germ. *Saft*), — is an advantage of the Latin. *Σίσυφος* is the *σοφός* in the superlative, *ἀ-σύφ-ηλο-ς* 'insipiens.' Cp. Van. 992. *σκάφος*, *σκάφη* we discussed under No. 109, *στέφ-ω* at No. 224, *στύφ-ω* at No. 229. *στυφ-ελ-ίζω* we connected (No. 249) with *στυπά-ζειν* and *τύπτειν*. The connexion of *τρέφ-ω* with *τέρπ-ω*, maintained by Pott, was seen at No. 240 to be probable.

We have another instance of aspiration in the middle of a word in the rt. *ταφ*, which appears in *ἐ-τάφ-η-ν*, *τάφ-ος* (pres. *θάπ-τ-ω*). For the identity of this root with Skt. *dabh*, conjectured by Kuhn 'Ztschr.' ii. 467, finds no confirmation in the usage of the latter root as stated by the 'Pet. Dict.' ('damage,' 'deceive'). But it is equally impossible to hold another etymology, supported by Bopp 'Gl.,' Pott i<sup>1</sup>. 257, Grimm 'Gesch.' 231, according to which *ταφ* would be equivalent to Skt. rt. *tap* 'burn,' from which on p. 501 we derived *τέφ-ρα*. This etymology, which would suit very well with the very ancient custom of burning corpses, appeared to receive its main support from the gloss of Hesych. *ἄθαπτος*



*ἄκαυτος*. But the addition *ἢ ἄκλαυστος* *θάψαι γὰρ τὸ κλαῦσαι* (so the MS.) turns the whole notice into a puzzle, which can give us no help. As Hugo Weber shows in Jahn's 'Jahrb.' 1853 p. 597, *θάπτειν* means in Homer properly 'to inter,' while *τάφος*, *ταφή* and especially *τάφ-ρο-s* 'ditch,' do not at all suit the notion of burning. Hence it is much better to 513 accept Hugo Weber's own explanation, advanced also by Pott ii<sup>2</sup>. 467, but not held to by him, from the rt. *dha* (No. 309) from which *dha-p* would be an expansion (cp. *dhū-p* Gk. τυφ No. 251). In Skt. the causative from *dhā* 'put' is *dhāpājā-mi*. From 'put' comes readily the notion of condere 'put aside,' 'put away with care.' *ἐ-τάφ-η-ν* was then based upon the aspiration of the final consonant, and in consequence of this, the loss of aspiration of the initial. But a difficulty is presented by *τάφ-ρο-s*, inasmuch as the word does not mean 'grave' but any kind of trench<sup>1</sup>.

The aspiration of a medial is limited to a much narrower range. This is easily understood, since the hard aspirate, the only one known to the Greeks, is one step further removed from the medial than from the tenuis. The aspirate which has arisen from a medial has evidently undergone a double change: on the one hand it has been hardened, on the other it has been also aspirated. General considerations are therefore of themselves sufficient to make us especially cautious in admitting such a transition.

So far as I know, it has never been maintained that in any case an initial *χ* corresponds to a primitive *g* in the kindred languages, or a *φ* to a *b*. On the other hand there are some words in which it looks as if *θ* corresponded to a primitive *d*. But a careful investigation compels us to deny this agreement most positively. The first word belonging here is *θεό-s*, which is commonly grouped with Skt. *dēvá-s* and Lat. *deu-s* (No. 269).

<sup>1</sup> Recently Joh. Schmidt 'Vocal.' i. 164 has compared *τάφρο-s* with ChSl. *dŭb-rŭ* 'ravine,' OHG. *tobel* 'saltus,' Lith. *dub-ù-s* 'hollow,' 'deep,' *dūbē* 'pit,' Goth. *diub-s* 'deep,' from which we should arrive at a rt. *dhabh*, *dhambh*. In that case we should have to separate *τάφρο-s* from *τάφο-s*, and certainly from *θάπτειν*.—Cp. also OIr. *fudomain* 'deep' (Z<sup>2</sup>. 874), Cymr. *dwfn* 'deep' with OIr. 'world,' OGall. *Dubno-rex*, *Dumno-rix*.

show no trace of such an initial letter, so that the whole combination utterly breaks down. We placed these words under No. 515. — Gerland 'Ztschr.' x. 452 derives *ρίδαμός*-s 'asparagus,' which is given us only by Hesych., and which is suspicious from the neglect of alphabetic sequence, from the rt. *vardh* 'grow;' it is only possible to assume a community of root with *ρίζα* (No. 515: cp. Siegismund 'Stud.' v. 182).

More frequently *β* is identified with a *bh*, especially in the rt. *βρεμ*, the relation of which to the Skt. *bhram* is discussed fully by Kuhn 'Ztschr.' vi. 152. Between *βρέμειν* (cp. *ὑψι-βρεμ-έ-τη-ς*) 'sound,' 'roar,' *βρόμος*-s 'roar,' *βρον-τή* 'thunder,' and the Lat. *frem-e-re*, *frem-or*, *frem-i-tu-s* we may recognize an almost complete identity of meaning. To these we may add the ON. *brim* 'breakers' (probably also Corn. *bram* 'crepi-  
 531 tus ventris' Z<sup>2</sup>. 294), which establishes the antiquity of the *bh*. The corresponding Sanskrit words show instead of the meaning of a whirring sound that of a whirring whirling motion, an idea, which, as Kuhn shows, is further facilitated by particular points of agreement of various kinds between Sanskrit and the Teutonic languages. Thus this comparison, with which Döderlein 'Gloss.' 932 also agrees, may claim at least a certain probability. Cp. Fick i<sup>3</sup>. 702, Van. 611. We may conjecture that the true form of the rt. *φρεμ* occurs with a modified vowel in *φόρμιγξ* 'lyre.' For *βρέμεσθαι* is said in Pindar ('Nem.' xi. 7) also of the lyre. *βράσσειν* 'ferment,' 'seethe' (rt. *βρα-τ*) has been compared with Lat. *fre-t-u-m* and *fer-v-eo*, which suit in meaning (Van. 605 ff.). But *β* may here have originated in *f*, so that we discuss the word on p. 587. — Grassmann 'Ztschr.' xii. 93 compares *βρεχ-μός*-s, *βρέγμα* the front part of the head, *sinciput*, with AS. *bregen* 'brain,' from which it would follow that the initial sound was originally *bh*, were there not much doubt remaining, both as to the form and as to the meaning, in the case of a word entirely isolated in Greek. [Hippocrates v. c. 896 derives the word from *βρέχω*, because this part of the head is the longest in hardening.] — It would be easier to believe that *βρύω* 'teem,' *βλύω*, *βλύζω* 'spirt,' both coming often in contact in their compounds, go along with *φλύω* (No. 412 d), which they closely approach in meaning. Cp. Pott W. i. 1139. Corssen



'Nachtr.' 221 connects *βρῦτο-ν* 'fermented drink,' which apparently belongs here, with Lat. *dē-frūtu-m*. — Here the question is only as to the interchange of *bhr* and *br*. But that even before a vowel *bh* should have simply become *b*, as Grassmann maintains with regard to rt. *bha*, with which he connects *βάζω*, seems to me incredible. Even the comparison of *βασκαίνω* 'bewitch' and *fascinare* (Corssen ii<sup>2</sup>. 257), though attractive as far as meaning goes, does not convince me of it.

A verbal stem, in which we can hardly fail to recognize the same phonetic change where it is not initial, is the rt. *λαβ*. Here we find even within the limits of the Greek language the forms *λάφ-υρο-ν* 'booty,' *ἀμφι-λαφ-ής* 'embracing,' 'wide,' and the perf. *εἰ-ληφ-α*, where the *φ* does not quite fall under the analogy of the majority of the aspirated perfects ('Greek Verb' pp. 180, 404). Now we find in Skt. the rt. *labh* (*lābh-ē*) in meanings which fully agree with the Greek 'seize,' 'secure,' 'receive,' but also (with *upa-*) *concipere* in the sense of the Greek *ἐν γαστρὶ λαμβάνειν*, with the substantive *lābha-s* 'obtaining,' 'gain' (cp. *λήμμα*), so that Bopp 'Gl.,' Pott i<sup>1</sup>. 259, Benf. ii. 139 and others group these words together. The transition from *bh* to *β* in the case of this root readily takes its place by the side of the instances mentioned above, in which the preceding nasal occasioned the loss of the breathing. For we meet this nasal, not merely in the pres. 532 *λαμβ-άν-ω*, where it may to a certain extent be regarded as an anticipation of the *ν* in the derivative syllable, but also in the Ion. fut. *λάμψομαι* and aor. pass. *ἐ-λάμφ-θη-ν*. It is not wanting in Skt. either, for there we find *a-lambh-a-nta* = *ἐ-λαμβ-άν-οντο*, and the causative *lambhá-jā-mi*, *lāmbh-ja-s* 'attainable.' Now as we must frequently, e. g. in the termination of the weak aorist *σα* = *sam*, and of the acc. sing. and plur. *α* = *am*, *ας* = *ans*, recognize a Greek *α* as the representative of *am*, *an*, it is not too bold to refer *λαβ* in *ἐ-λαβ-ον* to *λαμβ*. In the same way on p. 312 we saw in *μαθ* the abbreviation of *μανθ*. Thus here too the nasal would give the occasion for the loss of breathing. Hence so far the expedients, to which we have had to resort, have been simple. But there are still some obscure points, especially the form *λάζομαι*, which is Homeric

and Ionic generally, and which is identical in usage with λαμβάνω, λαμβάνομαι, λελαβέσθαι, with its by-form λάζυμαι. ('Greek Verb' p. 122.) In these forms ζ takes the place of β, as in some words discussed above (p. 490), where β was shown to be the modification of a γ. It is the more surprising here, because there is absolutely no other case of contact between β and the aspirate. We shall come back to this question on p. 671. Another difficulty is presented by the initial letter. On the ground of the Hom. ἔλλαβ-ε and the common Greek εἰ-ληφ-α, εἰ-λημ-μαι Christ p. 83, and before him Benfey ii. 139, have maintained that λαβ and Skt. *labh* go back to an older *glabh*, and that this *glabh* is again identical with the rt. *grabh*, the meaning of which is nearly akin. To support this conjecture Benfey has quoted a form actually occurring, i. e. the Lith. *glob-óti* 'to embrace.' But there is no example of an assimilation of γλ to λλ. We must put ἔλλαβε by the side of forms like ἔλλιπε, discussed in the 'Greek Verb' p. 78, for which there is not the slightest trace of a double consonant at the beginning. — Sonne's notion ('Ztschr.' x. 128) of translating the bee-renowned Ὑβλα by 'Wablingen' 'honey-combs,' and thus connecting it with rt. ὕφ = *vabh* (No. 406 b), is at any rate ingenious.

From two different points of view δβριμο-ς 'powerful,' which occurs as early as Homer, has been suspected of containing a β which has arisen from an aspirate. It has been compared with Lat. *firmu-s*. But the *f* here has evidently been 'shifted' from *dh*, as we saw under No. 316, and this is of itself sufficient to deprive the comparison of all probability. On the other hand Böhtlingk and Roth in the 'Pet. Dict.' and Fick i<sup>3</sup>. 18, who adds the Goth. *ab-r-s* 'strong' connect it with Skt. *ambhrá-s* 'powerful,' 'terrible,' the stem of which is *abhrá-m* 'cloud,' which has been compared with δμβρο-ς (p. 528). But, apart from other objections, the Greek word can hardly be  
 533 separated from βρί-θ-ω, βρι-αρό-ς, βρι-μό-ς (μέγας, χαλεπός), βρί-μη (ἀπειλή Hesych.) and other words discussed by Lobeck 'El.' i. 80, which point to a stem βρι, akin to βαρύ-ς (cp. above p. 475) and a prothetic δ. (Cp. Van. 217.) We need attach no importance to the form δμβριμος, which is only found in late MSS. of the Iliad (Hoffmann 'Iliad xxi. and



xxii.' p. 121). — There are also various objections to the conjecture of Kuhn ('Ztschr.' iv. 114) that  $\delta\lambda\beta o-s$  may be traced back to  $\delta\lambda\phi$  ( $\acute{\alpha}\lambda\phi$ ). I have connected the word with  $\omicron\lambda\epsilon$  (No. 555).

### 5. SOFTENING.

By softening we mean the sinking down of an original tenuis into a medial. The justification of this term, and the conditions under which the phenomenon appears, have been discussed on p. 444. Generally speaking the tenuis rarely sinks into a medial in Greek, and hardly ever when initial; in the middle of a word this is only the case between two vowels, and in immediate connexion with fricatives, hence in the neighbourhood of sounds to which the medial, in consequence of its capacity for 'sonancy' comes nearer than the tenuis. The case is also very different with the various organs. The guttural tenuis, which we considered on pp. 444 f. to be the consonant requiring the most force of articulation, undergoes this softening the most frequently, the dental the most rarely; between the two stands the labial organ.

In the following words we may with certainty regard the  $\gamma$  as softened from  $\kappa$ :

$\acute{\alpha}\text{-}\mu o\lambda\gamma\text{-}\acute{o}\text{-}s$  'darkness,' only in Homer ( $\nu\kappa\tau\acute{o}s\ \acute{\alpha}\mu o\lambda\gamma\hat{\omega}$ ), which has been foolishly compared with  $\acute{\alpha}\mu\acute{\epsilon}\lambda\gamma\epsilon\iota\nu$ . It belongs to a rt.  $\mu\alpha\rho\kappa$ ,  $\mu\rho\alpha\kappa$ , Mod. Gr.  $\mu o\upsilon\rho\kappa\acute{\iota}\zeta\epsilon\iota$  'it grows dark.' — Cp. p. 568.

$\acute{\alpha}\rho\eta\gamma\text{-}\omega$  'defend,' 'help,' with  $\acute{\alpha}\rho\omega\gamma\text{-}\acute{\eta}$ ,  $\acute{\alpha}\rho\omega\gamma\text{-}\acute{o}\text{-}s$  we placed under No. 7. All the meanings of the rt.  $\acute{\alpha}\rho\kappa$ , especially those occurring in  $\acute{\alpha}\nu\tau\text{-}\acute{\alpha}\rho\kappa\text{-}\eta s$ ,  $\pi o\delta\text{-}\acute{\alpha}\rho\kappa\text{-}\eta s$ ,  $\acute{\alpha}\rho\kappa\text{-}\iota o\text{-}s$ , recur in  $\acute{\alpha}\rho\eta\gamma\omega$ , so that we may with confidence venture to assume a form  $\acute{\alpha}\rho\alpha\kappa$ , expanded by a subsidiary vowel, from which came  $\acute{\alpha}\rho\eta\gamma\text{-}\omega$ . The soft guttural appears only between two vowels. We meet a vowel of the same nature also in the cognate  $\acute{\alpha}\lambda\text{-}\epsilon\text{-}\xi$  No. 581. The objection raised against this view, that a vowel of such an origin cannot be lengthened, breaks down, when we consider  $\sigma\kappa\text{-}\eta\text{-}\nu\acute{\iota}\pi\tau\omega = \sigma\kappa\nu\acute{\iota}\pi\tau\omega$ ,  $\sigma\kappa\acute{\alpha}\rho\text{-}\acute{\iota}\text{-}\phi o s$  and  $\sigma\kappa\acute{\alpha}\rho\phi o s$ ,  $\acute{\alpha}\rho\text{-}\eta\text{-}\nu o\text{-}\beta o o\sigma\kappa\acute{o}\text{-}s$  and st.  $\text{F}\alpha\rho\nu$ , forms which have to be treated on p. 728 ff.

- 534 ἄρπ-α-ξ corresponds so clearly to the Lat. *rap-a-x*, that no one will think it too bold to assume a Greek stem ἄρπ-α-κ corresponding to the Lat. *rap-ā-c*. Further details under No. 331.

διαθηγή, as Democritus of Abdera is asserted to have said for διαθηκή, seems, after what Bernhardt ad Suidam s. v. ῥυσμός, and L. Dindorf in Steph. Thes. s. v. διαθηγή have written on the question, to be only a false reading for διαθιγή (rt. θιγ), as I. Bekker now reads in Suidas. This instance is therefore in any case very doubtful.

κραυγ-ή 'cry' = Skt. *krōḡ-a-s* 'cry' from the rt. *kruḡ* (from *kruk*), with κραύγ-α-σο-ς 'crier,' κραυγάω, κραυγανῶμαι ('Greek Verb' p. 183, 224). Lottner 'Ztschr.' xi. 185 adds Goth. *hruk-jan* 'to crow' (cp. κρώζειν *crocitare*), in spite of the want of shifting of the second *k*. Imitative words have many peculiarities. Fick i<sup>3</sup>. 524, 540 connects κράζω with κρέκειν, which denotes the slighter sound of chirping or making to whirl, and ChSl. *krak-a-ti* 'to crow,' but κραυγή with rt. *kruḡ*. It is certain that the Greeks regarded κραυγή as the verbal noun to κράζειν.

κρίζω, κέκριγα 'squeak,' 'rattle' in the Attic writers, in Homer κρίκε 'cracked' with the tenuis retained. 'Greek Verb' p. 224, ChSl. *krikŭ* 'cry.' Fick i<sup>3</sup>. 539. Vaníček p. 141 has collected all imitative words of this type.

λάλαγ-ες 'chatterers,' as a certain kind of frogs were called according to Hesych., with λαλαγ-ή, λαλαγ-έω are compared by Budenz 'Das Suffix ΚΟΣ' p. 72, probably correctly, with λάβραξ, γαύραξ and other words with the suffix -ακ, which in many cases has plainly something of a diminutive force. λάλαξ is therefore a kind of diminutive to λάλο-ς and λαλ is to be given as the root. Cp. Van. 772.

In μίσγ-ω with its rt. μιγ ἐ-μίγ-η-ν, μίγ-α the γ was seen under No. 474 to be a softening from κ, which has been retained even in Latin, the language most akin. Probably the softening came in first in forms like μιγ-ῆ-ναι, μίγ-α, μιγ-άς, μίγ-νν-μι, between vowels, and before the nasal.

ὀλίγ-ο-ς we connected under No. 553 with Skt. *liḡ*, according to which *liḡ* was to be regarded as the root. In λίσσον· ἔλασσον we thought a trace of the κ was to be discerned.



ὄρνυξ (st. ὄρνυγ) under No. 507 was connected with Skt. *vart-ikā*. In this case the Greek grammarians bear witness to the by-form with *κ*.

πήγ-νυ-μι (No. 343) has indeed in Greek, in all immediately related forms, παγ as its root, but the Skt. *paç*, and still more plainly the Lat. *pac-i-sc-o-r* by the side of *pang-o*, point to *paḡ*. From this harder form are explained the aspirate in *πάχ-νη* and *παχύ-ς* (cp. p. 521) and the *σσ* of *πάσσαλο-ς*; that the latter belongs to this root is established by Lat. *pā-lu-s* (= *pag-lu-s*),<sup>535</sup> *pax-illu-s* (Schwabe 'De deminutivis' p. 97). The Lat. *pessulu-s* on the other hand is the Italian borrowed form of *πάσσαλο-ς*.

In *πλεγ-νύ-μι*, the late by-form of *πλέκω* (No. 103 'Greek Verb' p. 111) *ν* is still more plainly the occasion of the softening.

In *ρήγ-νυμι* rt. *ῥρακ* we shall find below the same change.

*σίγ-ή* we traced back (No. 572) to a rt. *svik*.

*στεργάνο-ς* we find quoted in Hesych. with the meaning *κοπρών*. The identity of the stem with that of the Lat. *sterc-us* is evident. Cp. No. 110.

We saw under No. 234 that *τέγγ-ω* 'wet,' quite a parallel to Lat. *ting-o*, probably goes back to a form with *k*.

*τήγ-ανο-ν* 'melting pot,' clearly belongs to *τήκ-ω* (No. 231).

We may place here also the suffixes *-ιγ* (*μαστι-γ* as well as *μαστι*), *-ιγγ*, *-υγγ*, e. g. in *φῦσιγξ*, *φόρμιγξ*, *λαῖγξ*, *φάρυγξ*, *σπινθάρυγξ*; the connexion of these with the suffix *-κ* and *-κο* is placed beyond doubt, after what Budenz ('Des Suffix *-κος*') and Schwabe ('De deminutivis' p. 49 sqq.) have collected. In the same way the suffix *-υγα* in *μαρ-μαρ-υγή* with *\*μορμολ-υκ* (*μορμολύκειον*, *μορμολύττομαι*), though the latter has a different stem, corresponds to the Skt. *-ūka-s*. Ernst Kuhn 'Ztschr.' xx. 80.

To these examples of a *γ*, not initial, softened from *κ*, some others will be added on p. 674, inasmuch as this weakening will be established for those verbal-stems in *γ*, which have in the present-stem *σσ* (*ττ*).

In all these cases, therefore, it is a *κ*, not at the beginning of a word, but in the majority of instances between two vowels and accompanied by a nasal, which is softened to *γ*. It would be hard to give a single certain instance of

softening of an initial  $\kappa$ , with the exception of some stems with  $\kappa\nu$  and  $\kappa\rho$ , to which we return on p. 705. The identity of meaning makes it probable that  $\kappaνέφ-ας$ ,  $\gammaνόφ-ο-ς$ ,  $\deltaνόφ-ο-ς$  are to be placed together in this order (Lobeck 'Elem.' i. 95). I therefore regard  $\gamma$  in  $\gammaνόφ-ο-ς$ , which is described as Aeolic (Ahrens 'Aeol.' 73), as softened from  $\kappa$ ,  $\delta$  as arising by the influence of the  $\nu$  (cp.  $\acute{\alpha}\delta\nu\acute{o}\nu$   $\acute{\alpha}\gamma\nu\acute{o}\nu$   $\text{Κρητες}$  Hesych.). Döderlein, though I do not agree with his analysis of these forms, is certainly right in placing here also  $\kappaνώψ$   $\text{τυφλός}$  (Suidas), in which we should thus have one more witness in favour of  $\kappa$  ('Gloss.' 2246). — In the same way we may regard  $\kappaνέφαλον$  536 or  $\kappaνέφαλλον$  'cushion,' which is recorded as well as the Aeolic  $\gammaνόφαλλον$ , as the older form, and  $\kappaνάφ-αλο-ν$  'flock-wool,' which probably belongs to  $\kappaνάπτω$  'full,'  $\kappaναφεύς$ , etc. as the stem-word. Fick i<sup>3</sup>. 807 traces it to a rt.  $\text{skar}$  'shave,' 'scrape.' The stem  $\text{kambala}$  [Skt. subst. 'wool'] would then be related to  $\kappaναφαλο$  much as  $\acute{o}\muφαλο$  to OHG.  $\text{nabulo}$  (No. 403). Still the root remains doubtful. Others also of the numerous forms from a like stem show here and there the softer  $\gamma\nu$ . — To these must be added thirdly the Epic  $\gammaνάμπτω$  'bend,' to which we can ascribe the same relation to the form recorded by Hesych.  $\kappaνάμπτει$ ,  $\acute{\kappa}\acute{\alpha}\muπτει$ . — Finally there is  $\gammaράστις$ , a late by-form for the Attic  $\text{κράστις}$  'grass,' 'fodder.'

The dental medial appears much more rarely in the place of a tenuis. The instances which can be proved are the following:

$\deltaάπι-ς$  is used by Aristophanes and Xenophon and quoted by Athenaeus in the place of the older forms in  $\tau\acute{\alpha}\pi\eta(\tau)-ς$ ,  $\tauάπι-ς$  (Steph. Thes. s. vv.), which occur in Homer.

In the middle of a word  $\delta$  takes the place of  $\tau$  in  $\text{Ἀρτεμι-ς}$   $\text{Ἀρτέμιδ-ος}$ , while the Dorians (Ahrens 240) said  $\text{Ἀρτάμιτος}$  and derived from this the name of the month  $\text{Ἀρταμίτιος}$  and of the promontory  $\text{Ἀρταμίτιον}$ . The origin of the name is still obscure: [Preller i<sup>3</sup>. 237 accepts the derivation from  $\acute{\alpha}\rho\tau\epsilon\mu\acute{\eta}\varsigma$  *E* 515  $\nu$  43, which is as old as Plato 'Crat.' 406 b; Pott i<sup>1</sup>. 221 derives it from  $\acute{\alpha}\epsilon\rho\alpha$   $\text{τέμνουσα}$ !] We find also  $\thetaέμι-ς$   $\thetaέμιτ-ος$  in Pindar, as against  $\thetaέμι-ο-ς$ ,  $\thetaέμιδ-ος$ , so that the  $\delta$  here too seems to have originated in  $\tau$ . Still the case is different here because of the appellative  $\thetaέμι-ς$  (No. 309)



with its plural *θέμιστ-ες*, which occurs as early as Homer: the stem of this is probably shortened from *θεμιστι*, and is to be derived from the stem of the derivative verb *θεμίζω* (Leo Meyer ii. 331). In this case it is not a question of a phonetic transition, but of analogies of inflexion.

The two ordinals *ἑβδομο-ς* and *ὄγδοο-ς*, with their by-forms *ἑβδόματος*, *ὀγδόατος* are probably the only genuine Greek words, in which the favorite groups *πτ*, *κτ* sank down into *βδ*, *γδ*. The occasion lay, as I conjecture in agreement with Leo Meyer 'Ztschr.' vi. 292, in the influence of the *μ* and of the *ο*, which phonetically approximates closely to a *F*. I regard the *ο* of *ἑβδομο-ς* as an irrational vowel, to use the terminology of Corssen<sup>1</sup>. Cp. Dor. *ἑβδεμήκοντα*. Thus the *μ*, though separated by it from the stem *ἐπτ*, might still exercise a softening influence upon the *τ*, and this letter, as soon as it sank into *δ*, necessarily assimilated the *π* to itself. It is true that we can only prove from Greek the softening influence of the *μ* upon an immediately preceding *κ* or *χ* (*πέπλεγ-μαι*, *βέβρεγ-μαι*). But we have the analogy of the Slavonic *sed-mŭ* (= Lith. *septynŭ*), where the vowel disappeared entirely. The *ο* of *ὄγδοο-ς* too, though it takes the place of *ā* in the Lat. *octāvu-s*, was phonetically an irrational vowel, closely approximating to the spirant *F*, as is seen plainly from η 261, ξ 287, where *ὄγδοον* is to be scanned as disyllabic. I. Bekker<sup>2</sup> indeed — contrary to the traditional authority — instead of *ἀλλ' ὅτε δὴ ὄγδοόν μοι ἐπιπλόμενον ἔτος ἦλθεν* reads *ἀλλ' ὅτε δὴ ὀγδόατον*. This view closely approximates to that developed by Ascoli 'Stud.' ix. 358, only that Ascoli actually presupposes *septmo-s*, *okt-vo-s*. As no one will deny that the ordinal belongs to the corresponding cardinal numeral, this is an evident instance of weakening, which we must describe as such and attempt to explain, even if only by a weak analogy. The process remains unique, even after we have recognized the reason for

<sup>1</sup> [I. e. a vowel which does not exactly correspond in its duration either to a long vowel or to a short one. Such a vowel may either exceed or fall short of the ordinary length of a long or a short vowel. Here is meant a vowel which has not yet attained to the full length of an ordinary short vowel. Cp. Corssen ii<sup>2</sup>. p. 607.]

it, for in *ἐρετ-μός* the *τ* remains unchanged before *μ*, while \**τέτφαρες* became *τέσσαρες*. The much-used numerals have in general many peculiarities. (Cp. my paper 'On the range of the phonetic laws' *Berichte der phil. hist. Cl. d. k. s. Ges. d. W.* 1870 p. 33 f.).

*νέποδες* we regarded under No. 342 as equivalent to the Lat. *nepōtes*, but we found the occasion for the weakening of the *t* in the resemblance to *πόδ-ες* *νέποτες* would be a form quite without any analogy in Greek.

*παρδακό-ς* 'damp' (Aristoph. 'Pax' 1148), with its Ionic by-form *πορδακό-ς* is usually connected with the Laconian *πάρταξον* (M.S. *πάρταζον*) *ὑγρανον*, quoted by Hesych.; in that case the *τ* of the latter must be regarded as the more primitive. The origin is obscure, the words rare. Fick. i<sup>3</sup>. 670 compares *πλάδ-ος* 'wetness,' to which belong *πλαδάω*, *πλαδαρός* with Lat. *prā-tu-m*. The origin of these rare words is very obscure. [Paley notes: 'it is probable that we have here words purposely taken from the language of the Attic farmer.' Schol. *παρδακόν* *δίνυγον*. 'οὕτω γὰρ καὶ Ἀρχίλοχος καὶ Σιμωνίδης.]]

For *ποδαπό-ς* we find in a somewhat various usage, little differing from *ποῖος*, *ποταπό-ς* in writers like Dionysius of Halicarnassus, Josephus, and Philo; but their authority is not sufficient to establish the harder form as the older (Phryn. p. 56). The explanation of the pronominal form from an ablative *ποτ-* and *ἀπό* (Pott ii<sup>1</sup>. 265) is in any case extremely uncertain.

*σμάραγδο-ς* corresponds in meaning to the Skt. *mara-kata-m* and *marakta-m* (Bopp 'Gl.'). But the Greek word is certainly borrowed, and the Indian word is also without any affinities in Skt. (Pott ii<sup>1</sup>. 195, Benf. i. 533). And borrowed words have ways of their own.

The variation in the later vulgar language between *τ* and *δ* is treated by Lobeck 'Paralipomena' 149.

More frequently *π* and *β* stand face to face. Here the following words come under consideration:

*ἀβλόπες* (probably more correctly *ἀβλόπες*) was said by the Cretans, according to Hesych., for *ἀβλαβές* (Ahr. 'Dor.' 84). Although the Cretans sometimes instead of a genuine



medial really used the tenuis, or at any rate used a harder <sup>538</sup> sound, which seemed to the rest of the Greeks a tenuis (*κλαυκιδών* = *γλαυκιδών*, *κλάγος* = *γλάγος*, cp. Mor. Schmidt 'Ztschr.' xii. 216), yet here the *π* might really be the older sound, and the *β* of *βλάβ-ε-ται* (Hom.), *βλαβ-ή*, etc. might be softened from *π*. As *βλ* according to Greek phonetic laws takes the place of an initial *μλ* (rt. *μολ βλώ-σκ-ω*), we may perhaps trace *βλα-π* back to *μλα-π*, and regard this *μλα-π* as an expansion, determined by *π*, of the rt. *μαλ*, discussed under No. 457, which appears in this form in *μαλα-κό-ς*, *ἀ-μαλ-ό-ς*, whence *ἀμαλ-ἀπ-τω* (explained by *κρύπτω*) in Sophocles 'Frag.' 413 Dind. and Lycophon v. 34 (Van. 706), and with a transposed vowel in *βλά-ξ*. The Skt. *mlā* (*mlāi*), already compared there, with the meaning 'to become soft,' 'flaccid,' formed a causative *mlā-pájā-mi* 'to make soft.' Similarly Benfey i. 524. Homeric phrases like *βλάβεται δέ τε γούνατ' ἰόντι* (*T* 166, v. 34), *βλάβει δέ οἱ φίλα γούνατα* (*H* 271), *Διόθεν βλαφθέντα βέλεμνα* (*O* 489) favour this derivation more than that assumed by Döderlein ('Gloss.' 323), from rt. *βαλ βάλλειν*. Benfey ('Or. und Occ.' i. 574) and Bugge 'Stud.' iv. 325 compare Skt. *glā-p-ājā-mi* 'exhaust,' 'weaken,' 'suffer to go to ruin,' supposing that the organ of the initial consonant has been assimilated to that of the consonant in the middle. I still think it simpler to start from rt. *mā*. Otherwise Pott W. i. 594.

*ἀβρό-ς* is connected by Christ 'Lautl.' 100 with *ἀπ-α-λό-ς*. The meanings are indeed not identical, as *ἀπαλός* means rather 'tender,' 'soft,' *ἀβρός* 'luxurious,' but they approach each other very closely, and quite coincide in *ἀπαλὸν γελάσαι* [*ξ* 465] and *ἀβρὰ γελᾶν* [*ἀβρῶς γελᾶν* Anacreont. 41. 3], which can scarcely be distinguished. Fick i<sup>3</sup>. 492 deduces a rt. *abh*, akin to *ἀφ-ρό-ς* 'foam,' with which I connect ('Stud.' ii. 440) *νήφω* (cp. *νηστis*) as the opposite of *eb-riu-s*. The meaning of the rt. *abh* must have been that of teeming fulness. If this conjecture is correct, we have here an instance not of softening, but of loss of aspiration.

*Ἀμβρακία*, the later form for *Ἀμπρακία*, evidently owes its *β* to the same weakening influence of the preceding *μ*, which at a later period of the language attacked every *π*, and

finally gave rise to the custom in modern Greek of writing *μπ* for the sound of our *β*.

*ἱαμβο-s* stands in the same relation to *ἰάπ-τ-ω* 'throw' ('Greek Verb' p. 167). It can hardly be doubted that *ἱαμβο-s* meant originally 'a cast,' then a verse cast at any one, 'a jeering verse.' Even Aristotle felt something of this primary meaning in the derived *ἱαμβίζειν*, when he says Poet. 4,  
 539 *ἱαμβεῖον καλεῖται, ὅτι ἐν τῷ μέτρῳ τοῦτ' ἱαμβίζον ἀλλήλους*. By nasalization *ιαβ* became *ιαμβ*, just as *κορυφ* (*κορυφή*) became *κόρυμβο-s* (cp. p. 527).

St. *καλυβ* *καλύβ-η* 'hut,' *καλύπτω* 'cover up,' has quite the appearance of an expansion of the rt. *καλ*, mentioned under No. 30 and on p. 529 and the Lat. *clup-eu-s* makes it probable that originally *p* stood here instead of *β*. (Cp. Pott W. i. 680).

*καρβατίνη* *ὑπόδημα* (Hesych.) is certainly rightly considered a weaker and dialectic form of *καρπάτινο-s* 'leathern,' the neuter of which word is quoted with the same meaning.

*κεβάλη* and *κέβλη* were mentioned above p. 511. There is a remarkable by-form *κύβη*, proved by 'E.M.' 543, 22, preserved in *κυβιστάω* (*εἰς κεφαλὴν πηδῶ*), *κυβιστητήρ*, from a lost *κυβίζω*. This form too has by-forms with *π*: *κύπρος* 'κεφάλαιον ἀριθμοῦ', from which M. Schmidt ad Hesych. derives *cifra*<sup>1</sup>, 'cipher,' and with *φ*: *κύφερον ἢ κυφὴν κεφαλὴν Κρητες* (cp. Lobeck 'Proll.' 91). The forms with *φ* Fick i<sup>3</sup>. 537 compares with Skt. *ka-kúbh* (*f*.) 'top,' 'point.'

The variation between the names for the 'ape' *κῆπο-s* or *κῆβο-s* has little importance as the name is that of a foreign animal (A. Müller in Bezenb. 'Beitr.' i. 280).

*κε-κεβώ-s* occurs on the inscription of Andania l. 79 (ed. Sauppe) for the common *κε-κλοφ-ώς* from the rt. *κλεπ*. *ἐγγραβώς* *ἐγγράφας* in Hesych. (cp. 'Greek Verb' p. 408). Perhaps we are to assume already for this *β* the pronunciation *v*, and for *φ* about this time here and there that of *f*, so that here the hard spirant is replaced by the soft.

*κομβακεύεται κόμπους λέγει* (Hesych.) owes its *β* evidently

<sup>1</sup> [Better derived from Arabic *cifr* 'empty,' 'nought,' *çafira* 'to be empty.' Cp. Brachet s. v. *chiffre*, Diez s. v. *cifra*.]



to the nasal (Leo Meyer i. 41), and it is the same with κρέμβ-αλο-ν 'clapper,' whence κρεμβαλιάζω, κρεμβαλιαστύς, compared with *crepare, crepundiae* (Walter 'Ztschr.' xii. 379, Pott ii<sup>2</sup>. 683).

λεβ-ηρί-ς 'hide,' 'skin,' and λοβ-ό-ς 'pod,' 'shell,' whence ἔλλοβα 'pulse,' cannot be separated from λέπ-ειν 'peel,' λέπ-ος 'scale,' 'rind,' 'pod,' and the more or less exactly equivalent forms λέπ-υρο-ν, λοπ-ό-ς, λεπ-ί-ς. We may add Lat. *lib-er* 'bast' (inner bark), 'book' (Hehn<sup>3</sup> 521). The meanings 'lobe of the ear' or 'of the liver,' which λοβ-ό-ς also has, must thus be regarded as secondary. The lobe of the ear was compared to the drooping pod of pulse, and named from this.

στιλβ-ω 'glitter,' 'shimmer,' when compared with the adj. στιλπ-νό-ς, and the proper name Στίλπων must be regarded as the softened form. The rt. στιλπ has indeed not yet found any exact correlate in the cognate languages, for Fick's conjectures i<sup>3</sup>. 600 are very uncertain, but Benfey's connexion of it with στεροπή, ἀστράπτω (i. 662), accepted by Walter 'Ztschr.' xii. 540 379, has much probability, if we consider the complete similarity of meaning.

στοιβ-ή has been discussed under No. 229 in its relation to στύπ-ο-ς, Lat. *stup-a, stip-a*. We shall be obliged to assume for Greek too a rt. στι.

ὑβρι-ς was connected by Schneider in his Lexicon with ὑπέρ (No. 392), comparing *superbia*. Pott W. i. 414 detects in the ι the rt. ἰ 'go,' so that ὑβρι-ς would mean 'transgression,' ὑπερβασία. Attractive as this sounds, it still has its difficulties. In a compound of this kind, we could hardly expect the bare root; at least I do not know any Greek noun-form at all analogous. And besides, it is perhaps not merely an accident that the rt. ἰ is not compounded with this preposition either in Greek or in Latin. Hence it seems to me more probable, that the ι of ὑβρι-ς is merely derivative, like the u (o) of the Latin adjective *super-u-s*, which is extant in Greek (Pott i<sup>2</sup>. 678) only in a special technical usage in ὑπερο-ν or ὑπερο-ς 'pestle,' and ὑπέρα 'upper rope,' and in the derived 'Υπερίων (Düntzer 'Ztschr.' xii. 7). It is worth noticing that ὑβρι-ς as a masculine in Hesiod "Εργα 190 (κακῶν ῥεκτῆρα καὶ ὕβριν ἀνέρα) appears as a nomen agentis

(cp. Lobeck 'Paralipp.' 41). G. Hermann actually assumes a neuter to it in Aeschylus 'Suppl.' 785 (γένος γὰρ Αἰγύπτειον ὕβρι). The word is singular in any case. Ludw. Lange in the 'Ztschr. f. d. österr. Gymn.' 1863 p. 301 prefers to regard ὕβρι-s not as a derivative from ὑπέρ, but as a parallel form, also derived from that *upa*, which under No. 392 we learnt to recognize as the stem-form of ὑπό and ὑπέρ. We should then have to divide ὕπ-επο-s and to compare ὕβ-ρι-s, so far as the suffix goes, with ἰδ-ρι-s. It is true that this analogy could not be used in the case of the substantive. Therefore, even if these views are accepted, there are difficulties remaining with respect to the formation of the word. In any case ἀβρό-s should be compared for the βρ. Bezzenberger's comparison ('Beitr.' ii. 155) of ὕβρι-s with Skt. *ug-rá-s* 'violent,' arouses doubts on the score of form and of meaning alike.

All the other instances, in which the same phonetic change has been assumed, are at least very doubtful. It is improbable that βό-σκ-ω corresponds to the Lat. *pa-sc-o*, as among others Leo Meyer, 'Vergl. Gr.' i. 41, and Zacher 'De nominibus in *aïos*' p. 64 (quite otherwise Fick ii<sup>3</sup>. 229), assume, if only because no other example of an initial β for π before a vowel can be  
 541 established. It is only of the Delphic dialect that we know (Ahrens 'Dor.' 83) that this softening occurred in it, and there is credible authority for it only in the case of extremely few words. Among them Βύσιος (rt. πύθ No. 328) may be explained otherwise, βατεῖν possibly agrees with πατεῖν only in meaning, while it belongs etymologically to rt. βα. βικρός for μικρός may be allowed to stand. Still we owe the notice to the not very trustworthy Plutarch, who wished to explain Βύσιος. Zacher adds the Homeric ἡ-βαῖό-s, later βαῖό-s, tracing it back to βαῖ-jo-s and connecting it with Goth. *fawai* 'few:' but I cannot approve of this, all the less because the same stem appears in the form πᾶν (No. 351). Pott W. i. 199 agrees in this opinion. — The softening in βρα-βεύ-s 'umpire' would be less surprising on account of the ρ. This word, in Greek quite isolated, is by Benfey ii. 106 referred to *pra-bhū* 'praesesse;' but this does not explain either the β or the α, so surprising beside πρό, or the special meaning of the word, which Döderlein ('Reden und Aufsätze' ii. 145) ascribes



to the rt.  $\mu\epsilon\rho$  ( $\mu\epsilon\rho\sigma\mu\alpha\iota$  No. 467). This is satisfactory enough as regards the meaning, and the initial letter, but whence comes the second  $\beta$ ? Are we to suppose this, as in rt.  $\beta\lambda\alpha\beta$  (p. 538), softened from  $\pi$ , and to assume a st.  $\mu\rho\alpha\text{-}\pi$  with the meaning 'apportion to?' In either case the initial  $\beta$  might have favoured the softening. This remains, however, pure conjecture. — For  $\sigma\acute{\epsilon}\beta\omega$ , which Benfey 'Ztschr.' vii. 56 has attempted to connect with the Skt. rt. *sap* 'attach oneself to,' 'honour,' I may refer to what was said on p. 481. It is not even consistent with the meaning:  $\sigma\acute{\epsilon}\beta\sigma\mu\alpha\iota$ ,  $\sigma\acute{\epsilon}\beta\alpha\varsigma$  ( $\sigma\acute{\epsilon}\beta\alpha\varsigma \mu'$   $\acute{\epsilon}\chi\epsilon\iota \epsilon\iota\sigma\sigma\omicron\rho\acute{\omicron}\omega\nu\tau\alpha$   $\gamma$  123),  $\epsilon\upsilon\sigma\epsilon\beta\acute{\eta}\varsigma$ ,  $\sigma\epsilon\beta\acute{\iota}\zeta\omega$  we have the fundamental notion of sacred, astonished or retiring awe, just the opposite, therefore, of the notion of 'attaching oneself to,' suggested by Benfey as a link between the two.

According to these investigations of ours, softening has altogether a very limited range. Even including foreign words, isolated dialectic forms and suffixes, we only obtained 26 instances of  $\gamma$  for  $\kappa$ , 7 of  $\delta$  for  $\tau$ , 13 of  $\beta$  for  $\pi$ , 46 in all, an extremely small number in comparison with the frequency of the instances in which the hard explosive has been faithfully retained, the number of which above (p. 408) reached 319. It is evident that this result by no means confirms the attempts, which have been made in various quarters, to prove that Greek suffixes in  $\delta$  are modifications of those in  $\tau$  which are so widely retained, or to explain Graeco-Italic pronominal forms in  $d$  from an older  $t$ .

In earlier editions of this book I thought I could attach to the weakening of the tenuis to the medial a phenomenon, for 542 which I regarded only two instances as demonstrated, the sinking down of an original  $bh$  to the spirant  $v$  ( $f$ ). But the rarity of the process was enough of itself to awaken mistrust. There is also the consideration that, as we shall show below, the sound of the  $f$  was probably tolerably far removed from the sound of the  $bh$  hardened among the Greeks to  $\phi$ . The two roots meant here are rt.  $f\alpha\rho$   $\acute{\alpha}\gamma\nu\nu\mu\iota$  'break,'  $\acute{\alpha}\gamma\acute{\eta}$  'breach,' 'breakers,'  $\acute{\alpha}\text{-}\alpha\gamma\text{-}\acute{\eta}\varsigma$  'unbreakable,' previously quoted by me under No. 654, and rt.  $f\pi\alpha\rho$   $\rho\acute{\eta}\gamma\text{-}\nu\bar{\nu}\text{-}\mu\iota$  'tear apart,' 'break apart,'  $\rho\acute{\eta}\gamma\text{-}\mu\alpha$  'rent,'  $\rho\acute{\eta}\gamma\text{-}\mu\acute{\iota}\nu$  'breakers,'  $\delta\iota\alpha\rho\rho\acute{\omega}\xi$  'broken

through,' *ῥωγαλέο-s* 'torn apart' (previously No. 655). To the varied evidence for the *F* in both groups of words we shall return. The rt. *Faγ* appeared to correspond to Skt. *bhaṅg* (*bhanāj-mi*) 'break,' 'burst apart,' *bhaṅgi-s* 'outburst,' 'wave,' Lith. *bang-à* 'wave,' *Bang-pu-tl-s* 'wave-blower' (a sea-god), OIr. *com-boing* 'confringit,' but for these non-Greek words we can only deduce a rt. *bhaγ* (Fick i<sup>3</sup>. 689). The Greek *Faγ* remains isolated. It is true that Fick i<sup>3</sup>. 761 tries to connect the latter with Lat. *vag-u-s*, Lith. *vingé* 'curving,' 'bending' = OHG. *wenke* and *winchan*. But I do not find here any striking agreement in meaning. — But the case is otherwise with rt. *Fπαγ*. If we surrender, attractive as it is, the comparison with Lat. *frango*, Goth. *brikan*, verbs not represented, as it appears, in Greek, still *Fπαγ* finds an entirely corresponding parallel in the rt. *vraκ* (Fick i<sup>3</sup>. 773) and its by-form *vlak*. The hard *k* has been retained in *ῥάκ-os* (beside *λάκος* No. 86), Aeol. *βράκ-os* 'rag,' and in *βρακ-ίαι* *οἱ τραχεῖς τόποι* (Lobeck 'El.' i. 134), i.e. 'broken,' 'torn ground,' but shifted by aspiration in *ῥαχ-ία* (Ion. *ῥηχ-ίη*) 'breakers,' while *ῥήγ-νῦ-μι* goes along with the softened forms mentioned on p. 533 ff. (e. g. *πλήγ-νῦ-μι*). The notion 'tear,' which attaches to the Greek words, recurs in (*v*)*lac-er* (cp. *ῥωγαλέος*), (*v*)*lac-ini-a* and *lac-er-na*, which closely approach *λάκος* and *ῥάκος* (Van íček p. 908). If Fick is right in adding *εὔλάκα* 'plough' (for *ἐ-Flάκ-a*), which according to Hesychius was Laconian, the Greeks too were not without a by-form in *l*. Hence we can make good the connexion with the rt. *Fπακ* by assuming the usual softening, and on the other side aspiration.

### B. Sporadic Changes of the Nasals.

The nasals are so closely akin to each other, that there is nothing surprising in the change of one nasal into that of another organ. The most frequent instance is when we see the dental nasal passing into the guttural or labial under the influence of following sounds: *ἔγ-κειμαι ἔμ-πορος*: this is, as every one knows, extremely common in inscriptions, where two words come together, and not uncommon in MSS. (Giese 'Aeol. Dial.' pp. 84, 87, Lobeck 'ad Ajax.' vv. 786, 836,



‘Studien’ x. 211 ff.): ΕΜΠΡΟΜΑΧΟΙΣ, ΕΓΚΙΒΩΤΙΩΙ, ἐμ-μέσῳ, ἀμβωμοῖσι. Hence, as Giese u. s. very justly says, all final nasals coalesce into a single one. *ν* represents etymologically not merely Indo-Germ. *n*, but also *m*, and it is purely accidental if, in consequence of an assimilating influence, the original labial nasal, e. g. in ΤΕΜ ΜΥCΙΑΝ, ΤΩΜ ΜΙCΘΩ-CEΩΝ phonetically reappears. From the Greek standpoint *ν* still remains the prevalent sound. The analogies of cognate languages were adduced above p. 448. It is somewhat remarkable that the dental nasal occasionally makes its way from the end of a word into the word itself. This is undoubtedly the case with the Doric pronominal accusative *νίν*, as compared with the Epic *μίν*. So far as I know, Döderlein (‘Reden u. Aufsätze’ ii. 144) was the first to suggest the explanation, that this accusative had originated in *ίμ-ίμ*, and was thus equivalent to the OLat. *em-em* (eundem), quoted in Paulus ‘Epit.’ p. 79. As a reduplicated accusative (cp. *se-se*) of the wide-spread pronominal stem *i* = Lat. *i* (*i-s*, *i-d*), *μίν* would thus correspond to a German *ihn - ihn* (*him - him*). This explanation seems to me to be self-evident. We have still in the Epic form *μ-ίν* the old labial, in the Doric *ν-ίν* already the later dental nasal. To be sure the reduplication would not have its intensive force here, any more than in the Lat. *sese*. But this might easily be lost in the course of time. Pronominal stems easily become attached to each other, as is shown by *ο-ὄ-το-s*, *αὐ-τό-s*, *hi-ce*, without the meaning of the compound stem being very different, in the usage known to us, from that of the simple stem. We may assume the same thing also with regard to reduplication. The pronominal stems *ma* and *na*, to which some have wished to refer *μίν* and *νίν* (Bopp ‘Vergl. Gr.’ ii<sup>2</sup>. 172, 177), are not used in any cognate language in a manner at all similar, except in composition<sup>1</sup>. In that case too we should have expected anything 544 rather than the *i*. With regard to the aphaeresis of the first *i* compare *νέρθεν*, *νέρτεροι* for *ἐνέρθεν*, *ἐνέρτεροι*. — In the same way it cannot be denied with regard to *ξύν* (*σύν*)<sup>2</sup> and Ion.

<sup>1</sup> Compare however the *-n-* (‘eum’) infixed in Old Irish (Z<sup>2</sup>. 330).

<sup>2</sup> Tycho Mommsen ‘Developement of certain laws for the use of the Greek prepositions *μετά*, *σύν* and *ἄμα* in the Epic writers’ Frankf. 1874,

ξύνό-ς = κοινό-ς in their relation to the Lat. *cum* (*com-*, *con-*, *co-*), which is discussed thoroughly, with much from other languages thereto appertaining, by Pott ii<sup>1</sup>. 840–858, whatever we may think about the origin of the word, that the *m* of the Latin is the older, and the *ν* its representative, which made its way from the termination into the middle of ξύνό-ς. As to the initial consonant, we may refer to Ahrens ‘Ztschr.’ iii. 164, where from Greek dialects the forms κυμ-, κυν- (*Κυν-ουρία* = *Confinium*) and Cyprian κιν- (*κινάουρου ψύχος τὸ ἄμα ἡμέρα* Hesych.) are deduced with great probability. The notion that ξύν has anything to do with Skt. *sākām*, derived from *sa*, is thereby rendered extremely improbable. — It is much the same with the numeral stem ἐν discussed under No. 599, supposing that this is really akin to the *ā-* of *ἄ-παξ* and *ἄμα*, *ὄμο*. The *ν* may have first established itself in the much used neuter ἐν, and from this have extended further. — Of the same kind is the *ν* of the two noun-stems χιον (No. 194) and χθον (No. 183). The Lat. *hiem-s* and *χθαμαλό-ς* show conclusively that the stems originally ended in *m*. Accordingly I agree with Brugman ‘Stud.’ ix. 308 in thinking that the *ν* of the nominative passed from thence to the remaining cases. It is in favour of this that no stems in Greek end in *μ* while those in *ν* are countless. Hence it was easy for the analogy of *δαίμων*, *δαίμονος*, etc. to assimilate to itself the older *χίων* \**χιomos*.

But frequent as is the change from *m* to *n* when final, and as a result of this, in certain cases within a word, we cannot without further inquiry assume that it is so at the beginning or in the middle of a word. In the Romance languages, it is true, the interchange between *m* and *n*, referred to on p. 448, is recognized, and Slavonic instances, like the Sloven. *Mikloš* = Nicolaus, must be taken into consideration. The connexion of the plural and dual pronominal st. *na* (Graeco-Ital. *nō*, whence *νῶ-ϊ*, *nō-s*) with the singular *ma* (Graeco-Ital. *me*) was until recently regarded as quite as undoubted as that of the Spanish *mueso* with the equivalent p. 40, calls attention to the length of σύν in Theocritus xxviii. 25 δῶρ' ὅν ἄλλ' ἔγωγε, and perhaps in Pindar ‘Isthm.’ vii. 46 παντὶ γὰρ ἐνν (Hermann ξύν) ἀλέγειν; and this certainly tends to link ξύν with the Ion. ξύνό-ς.



Latin *noster*. Now strong resistance is offered to it. — Bopp 545 in the 'Gloss.' (cp. Pott W. ii. 2, 172) connected Lat. *ten-e-brae* with Skt. *tām-as* 'darkness.' The rt. *tam* is in use in Sanskrit also as a verb, with the meaning 'choke,' 'stagnate' ('Pet. Dict.'), and thus darkness is regarded as that which checks the movements and actions of men [cp. *nox* Nos. 93, 94]. From Sanskrit itself we have also *tamas-ā-s* 'darkish,' *tamas-ā-m*, *tam-is-ra-m* 'darkness,' 'gloom,' and further Zd. *tem-añh* (n.) 'darkness,' *tem-añha* 'dark,' Ir. *teime*, *temel* 'obscuritas' ('Corm Gl.' p. 28, Z<sup>2</sup>. 768), Lith. *tam-sà* 'darkness,' *tam-s-ù-s* 'obscure,' ChSl. *tīm-a* 'tenebrae,' OS. *thim* 'obscurus,' OHG. *dem-ar* 'crepusculum' [German *Dämmer* and (more common now) *Dämmerung* 'twilight:' Old Frisian and Old and Mod. Eng. *dim*, according to Grimm; cp. ONorse *dinnur*]. Corssen ('Beitr.' 263) connects *ten-e-brae* (cp. *lat-e-bra*, *vert-e-bra*, *ter-e-brā*) with *tenere*. But it cannot be proved that either *tenere* or the rt. *tan* meant 'cover,' as Corssen assumes, or that *tenebrae* meant originally 'confinement,' 'prison.' The fact that the part. *ta-tā-s* can be translated, according to the 'Pet. Dict.' in certain applications by 'covered' by no means proves this, as Corssen 'Ital. Sprachk.' 290 assumes. Hence an adequate link of signification is wanting. On the other hand I agree with Lange ('Ztschr. f. österr. Gymn.' 1863 p. 302), that the rt. *tam* is retained with its *m* unchanged in *tem-ere*, which will thus mean something like 'blindly.' An entirely satisfactory explanation of the *n* in *tenebrae* is given by Brugman 'Stud.' ix. 393, where, employing the Italian change of *s* into *f* and within a Latin word into *b*, discovered by Bugge, he establishes \**tene-s-ra* (Lith. *tamsra-s*) \**ten-f-ra* as the primitive form.

The following are Greek roots and stems, in which *ν* has been conjectured, not altogether without probability, to have come from *μ*:

*βαίν-ω*, i. e. *βαν-ω* = *ven-i-o*, Skt. *gam*, Goth. *qam* p. 473. With *βαν* agrees the Umbrian and Oscan *ben*. It is not impossible that from the rt. *ga* there came by two different determinatives *ga-m*, and *ga-n* (so Ascoli 'Lautl.' 101).

*ῥ-ία* (plur.), later *ῥνία*, whence *ῥνί-οχο-s*, is assigned by Beafey ii. 202 to the Skt. rt. *jam* 'hold,' 'rein in,' whence the

substantives *jám-a-s* 'rein,' 'guide,' *jan-tá* (nom.) 'driver.' The meaning causes no difficulty. Kuhn 'Ztschr.' ii. 320, and Schweizer iii. 356 also agree. As to the formation of the word, the Homeric form *ήν-λο-ν* falls under the analogy of diminutives such as *ζων-λο-ν*, *παιδ-λο-ν*, and therefore presumes a nominal st. *ήνο* or *ήνα*, the *η* of which may be explained as in *λήθ-η* by addition of sound. We must not overlook the fact, that the rt. *jam* meets us with another initial letter in the word *ζημία*, which we shall have to discuss below (p. 625), so that I have no great confidence here in the transition from *μ* to *ν*<sup>1</sup>.

- 546 That *νύσσω* is akin to *ἀμύσσω* is regarded by Lobeck 'El.' i. 27 as certain. The former means rather 'stab,' the latter 'scratch,' two notions which are united in that of tearing open. The derivatives on either side are not numerous: *νύξις*, *νυγμός*, *νύγμα*, *νύσσα* — *ἀμυξις*, *ἀμυχή*. The gloss of Hesych. *ἀμυκαλαί· αἱ ἀκίδες τῶν βελῶν παρὰ τὸ ἀμύσσειν* is worth noticing, inasmuch as it proves that *κ* is the letter of the root, and establishes the identity of the st. *ἀμυκ* with the Latin *muc-ro(n)*. Still I should not like now to defend this comparison, especially as Fick i<sup>3</sup>. 645 refers *νύσσω* to a root akin to *δννξ*, which we mentioned under No. 447. The interchange of *angh* and *nagh* is discussed there, the *ν* of *νύσσω* is akin to that of *δννξ*, while OHG. *nagan*, ModGerm. *nagen* (cp. also ChSl. *noži* 'knife') preserves the *a*.

<sup>1</sup> My former comparison of the rt. *θαν* 'die' with the Skt. rt. *dham* (*dhmā*) 'blow,' although it might be supported by the analogy in meaning of Goth. *us-an-an*, *expirare*, and especially by *κέκρηκε· τέθηκε*, mentioned on p. 511, I abandon now, because it is more natural, with Windisch 'Stud.' vi. 259 and Fick i<sup>3</sup>. 640, to connect it with Skt. *dhvan* 'to veil one's self,' 'to be extinguished,' subst. *dhvan* (n.) 'gloom,' 'darkness,' *dhvas* 'to perish,' *dhvasa-s* 'destruction,' words which offer no phonetic difficulties. Also the comparison suggested by Benfey ii. 151 of *κίανω-s* 'blue steel,' *κίανω-s* 'of steel,' 'steel-blue,' 'blue-black' (*κνανῶπις*, *κνανοχαίτης*, *κνανόπεπλος*, *κνανόπρωρος*) with Skt. *çjā-mā-s* 'black,' 'blue-black,' is doubtful to me, because here two phonetic transitions, which present difficulties, would be found together in the same word, in spite of *κούαμα· μέλανα λάκωνες* (Hesych.) where *ου*=*υ*, which can never be shown to be the representative of a *j*, arouses doubt.



The other instances of this change, collected by Leo Meyer 'Ztschr.' viii. 136, are still more doubtful. In the assumed *ἐνο-s* 'year' (*τρι-ενο-s*) the evidence in favour of the rough breathing is much too uncertain to enable us to compare the Skt. *sāmā* 'summer,' 'season,' and the meaning is different besides. — It is probable that *χλαμύ-s* and *χλαῖνα* are connected. But the priority of the former is by no means self-evident. — We may finally mention the conjecture of Fick ii<sup>3</sup>. 20 that *ἀνία* 'plague' (*ἀνιάω, ἀνιάζω, ἀνιάρως*) is identical with Skt. *āmīvā* 'plague,' *āmīva-m* 'suffering,' 'pain.' This conjecture is favoured by the fact that no other etymology of *ἀνία* is to be discovered, while we must admit that the rt. *am* 'to be sick,' 'to suffer,' and the suffix *īva* do not occur elsewhere in Greek.

One of the most difficult words here in question is *γάμο-s* 'marriage,' with *γαμεῖν* (*ἐ-γημα*), *γαμέ-τη-s*, *γαμήλιο-s*, *γαμβρό-s*. With a completely corresponding meaning Sanskrit has also the labial nasal in *gāmātr* 'daughter's husband,' 'son-in-law,' *gāmā* 'daughter-in-law.' On the other hand in Lat. *gen-er*, which we can hardly make up our minds to separate from *γαμβρό-s*, the *n* presents itself. The Lith. *gen-ti-s* 'consanguineus,' and ChSl. *ze-ŭ* 'gener,' words of 547 corresponding meaning, do not help to decide, because in these the nasal or the nasal after-sound might have come from *m* as well as from *n*. I have hence previously placed *γάμο-s* under rt. *γεν, γα* (No. 128), and here, as in Lith. *gim-ti* 'to be born,' assumed the transition from *n* to *m*, while Ascoli 'Lautl.' 101 inclines to the view that from the primitive rt. *ga* came two independent further formations *ga-n* and *ga-m*. But further reflexion has led me to a different view. In Skt. we find the words *gām-i-s* 'related,' 'belonging to,' then like *gāmā* 'daughter-in-law,' *vi-gām-ān* 'akin' (cp. *vi-gāmin*) these completely recall the Lat. *gem-ini*, and exclude the connexion with *gen* 'beget,' for 'beget' and 'twins' are distinct conceptions. If we assumed it, we should have to derive with Bugge 'Ztschr.' xix. 423 *gemini* from *\*bi-gemini*. Thus we are brought to a rt. *gam*, meaning 'unite together.' Attempts have been previously made (especially by Schweizer 'Ztschr.' xii. 307) to prove that this root is a phonetic variation of rt. *dam* 'bind' (No. 260). But

Bopp 'Gl.' Benf. i. 460, Diefenbach ii. 193, though all introduce much that is unconnected. — Our words start from the rt. *svar*, whence comes the shortest form *Σείρ* in Suidas (Lobeck 'Paralipp.' 552 75), formed like *χείρ* (No. 189), and the fuller *Σείρ-ιο-s* (from *svar-ja-s*) in Archiloch. Frag. 61 Bergk<sup>2</sup>. The *ι* of the first syllable is epenthetic, as in the Homer. *θεμεῖλια*, or like the *υ* in *πολύ-ς*. This meets the objection of Max Müller ('Lect.' ii. 480). By the side of this rt. *σερ* for *σfer* a form *σελ* for *σfel* established itself in Greek. A third form, the affinity of which can hardly be questioned, is *ελ* in *ελ-άνη* 'torch,' perhaps in the proper name *Ἑλένη* [which M. Müller however identifies with *saramā*, deriving the latter from rt. *sar* 'go' (No. 502) 'Lect.' ii. 463]. — On the other hand *εἴλη* beside *ἀλέα* 'warmth of the sun' (Hesych. *βέλα, ἥλιος καὶ αὐγὴ ὑπὸ Λακόνων*), but also *γέλαν, αὐγὴν ἡλίου* (Hesych.), is better separated from this root with Fick i<sup>3</sup>. 772. Fick compares the words with the ChSl. *var-ū* 'heat,' to which we return on p. 587. — As in Greek, so in Latin the liquid has been preserved in both forms. To the forms in *r* belong perhaps Apollo *Sor-ānu-s* and the name of the mountain *Sōracte*, in Cato (ed. Jordan p. 11) *Sauracte*. Cp. Preller 'Röm. Myth.' 239. — The northern languages have only *l*. — The complete distinctness of these words from *ἥλιος-s*, later *ἡλιος-s*, has been proved 'Ztschr.' i. 29 ff. (cp. above on No. 612). — The Keltic words (Z<sup>2</sup>. 107, 250) seem to point to an original *savali*. [Cp. Corssen i<sup>2</sup>. 136].

664. Root *σκαλ* *σκάλλω* scrape, dig, *σκαλ-ί-s* hoe, *σκαλ-εύ-s* hoer, *σκάλ-μη* knife. — OHG. *scar* plough-share [AS. *scār* or *scear*].

Pott W. ii. 1, 685, Benf. i. 197. — Cp. No. 106 and Kuhn 'Ztschr.' iii. 427.

In addition to these instances, which we may put down as certain, there are also the following, which carry with them great probability, though they are still exposed to doubts of various kinds.

*γλαμυρό-s* or *γλάμων* 'blear-eyed,' with the verb *γλαμᾶν* and the equivalent *λημᾶν, λήμη*, which have lost an initial *γ*, and which were regarded by the Atticists (Moeris p. 193 Bekk.) as less good Attic, undoubtedly corresponds to the Lat. *gramia, gramiosus* (Pott i<sup>1</sup>. 117); but as *glamae* is also found in the same sense (Paul. 'Epit.' 96), the Latin word may be suspected of having been borrowed. — Otherwise Bezenb. 'Beitr.' i. 339.



ἐλμι-s, ἐλμιν-s (st. ἐλμι and ἐλμινθ), by-form ἐλμιγξ (st. ἐλμιγγ ep. Lobeck 'Paralipp.' 167) 'intestinal worm,' has been often (Pott i<sup>1</sup>. 84, Bopp 'Gl.') compared with Skt. *kṛmi-s* 'worm,' Lat. *vermi-s*, Goth. *vaúrm-s* 'serpens,' Lith. *kṛmi-s* (*kirmėlė*), ChSl. *črǔvǐ* 'worm,' OIr. *cruim* (Z<sup>2</sup>. 250). Stier ('Ztschr.' xi. 247) adds also Albanian words. All the forms might be explained from a primitive *karmi-s*, by supposing that from this first *kvarmi-s* was developed, then, in Gk., Lat., and Teut., *varmi-s*, and thence *felmi-s* (Corssen 'Nachtr.' 33). But as no certain instance of the mutilation of an initial *kv* to *v* in Greek has been pointed out, the connexion of the forms beginning with *k* and with *v* respectively remains doubtful. With Aufrecht (on 'Uggvaladatta' p. 276) therefore I only maintain with certainty that Skt. *kṛmi-s*, Ir. *cruim*, Lith. *kṛmi-s*, and ChSl. *črǔvǐ* [ep. p. 578] are identical, and that *vermi-s* and Goth. *vaúrm-s* are mutually 553 akin. But it seems to me that even the identity of the word ἐλμι-s (ep. p. 564), which is rare and restricted to one species of worm, with the common *vermi-s*, which includes the whole genus, is not yet indubitable. (Otherwise again Fick i<sup>3</sup>. 771.) Aufrecht takes *Fel* 'wind,' 'curve' (No. 527) as the root, but this has elsewhere always an *l* in Latin and Teutonic. The *νθ* of the st. ἐλμινθ is evidently, like the *γγ* of the rarer ἐλμιγγ, of a diminutival character (cp. above p. 495).

λα̂-as (for λα̂f-a-s) 'stone,' with the by-form λευ-s, to be deduced from λεύ-ω 'stone,' λευ-στ-ό-s, λευ-σ-μό-s, λευ-σ-τήρ, which with the irregularities of inflexion points to an old stem λα̂f, has been compared by Bopp 'Gl.' Benf. ii. 8 with Skt. *grāvan* 'stone for squeezing out the Soma-juice,' and then 'stone' in general, and with Lith. *rėvā* 'rock,' 'cliff.' As the Ir. *broo* 'millstone,' corresponds to the Skt. *grāvan*, the comparison with the Skt. word is very uncertain, especially as the loss of an initial *γ* (cp. λήμη above) is quite rare. Bezzenberger 'Beitr.' ii. 271 attempts a new, but by no means satisfactory combination.

λύσσα 'rage,' 'rabies' (of dogs) (Att. λύττα), whence come λυσσάω, λυσσαίν-ω, λυσσητήρ, λυσσώδης, λυσσο-μανής, etc., is connected by Bopp 'Gl.' and Benf. ii. 5 with Skt. *rush* 'to be angry,' (pres. *rōshā-mi* and *rúsh-jā-mi*), subst. *rush*

(f.) 'anger,' 'rage.' λύσσα would be for λυσ-*j*-a. Cp. Ascoli 'Krit. Stud.' 343. As a connexion with λύκο-*s* (No. 89) is possible, I place this comparison among the doubtful ones.

We must now take a general survey of the mutual relations of the two liquids. On p. 83 we held it to be advisable to treat *ρ* and *λ* as sounds nearly akin and frequently interchanging, but not as sounds which had only developed in this duality after the separation of the languages from a single Indo-Germanic liquid *r*<sup>1</sup>. We preferred to assume even for the Indo-Germanic period, by the side of the stronger trill, which is the older, wherever there is a variation between them, the existence of the gliding sound *l*. This view is  
554 confirmed by the numerical proportions of the occurrence of both sounds. About three-fourths of the whole number of liquids remain unchanged, one-fourth varies and fluctuates.

With regard to the liquids which remain unchanged, those instances are especially noteworthy, in which either *r* or *l* is found in a long list of languages, without the slightest tendency to a variation. We may quote as examples of *ρ*

No. 490 ἀροῦν Lat. *arare*, Goth. *arjan*, Lith. *ár̃ti*, Ir. *airim*.

„ 492 ἐρέσσειν Skt. *ar-i-tra-m*, Lat. *rēmu-s*, ON. *ár*, Lith. *l̃rti*

„ 39 καρδία Skt. *hṛd* (?), Lat. *cor*, Goth. *hairtô*, Lith. *szirdis*, Ir. *crúle*

„ 411 φέρω Skt. *bhārāmi*, Lat. *fero*, Goth. *baíra*, ChSl. *bera*, Ir. *do-biur*,

for *λ*

No. 31 καλό-*s* Skt. *kalja-s*, Goth. *hail-s*, ChSl. *cělŭ*

„ 546 λῦω Skt. *lū*, Lat. (*so*)/*lu-o*, Goth. *lau-s*

„ 536 b λάπτω Lat. *lambo*, OHG. *lefsa*, Lith. *lūpa*

<sup>1</sup> The existence of an *l* in the time before the separation of languages is maintained by Heymann in his essay 'The *l* of the Indo-Germanic language belongs to the Indo-Germanic primitive language' Göttingen 1873. The writer distinguishes an *l* belonging to the primitive language from that which subsequently arose out of *r*. — Armenian agrees in its *l* with the European, as Hübschmann 'Ztschr.' xxiii. 35 shows. — How here and there the choice between *r* and *l* was determined by contiguous syllables (*ἀργαλῆος* beside *ἀλγος*) is shown by Bechtel in his doctoral dissertation 'On mutual assimilation and dissimilation of the trills' Gött. 1876.



No. 236 *rt.* *τελ, ταλ, τλῆναι* Skt. *tul*, Lat. *tuli*, Goth. *thulan*, ChSl. *tulŭ*.

I see no reason why we should not, in stems and roots like these, assume that the liquid which we find universally was Indo-Germanic. — It is true that there is also a considerable number of words, in which Sanskrit shows the harder liquid, while the softer appears in Greek. But it is rare for Greek to stand isolated: as a rule Latin, and often another European language besides, agrees with it, e. g.

- No. 61 *κλόνι-s* Lat. *clūni-s*, Lith. *szlauni-s*, but Skt. *grōṇi-s*  
 „ 62 *κλύ-ω* Lat. *clu-o*, Goth. *hliu-ma*, ChSl. *slu-ti*, but Skt. *ḥru*  
 „ 366 *πίμπλημι* Lat. *ple-o*, Goth. *full-s*, ChSl. *plŭ-nŭ*, OIr. *lá-n*, but Skt. *pīparmi*  
 „ 563 *ώλένη* Lat. *ulna*, Goth. *aleina*, OIr. *uile*, but Skt. *ar-atnī-s*.

In such cases therefore the *l* may have been developed only after the severance of the other families from the Indian, or the Indo-Persian. It is very rare for an *r* to be found at all in the European languages, which is represented in Skt. by *l*: the instance formerly quoted here for this: *λακεῖν* Lat. *loqu-i*, Skt. *lap*, ChSl. *rek-g*, we saw under No. 85 that we could not maintain, chiefly because of the Skt. *p*. If there are any such cases, we have a choice between two views. Either we must admit the change of *r* into *l* in Sanskrit too, and of this we quoted instances from the Romance languages on p. 449, while it is common in the modern Cretan dialect as compared with ancient Greek (Voretzsch 'De Inscript. Cret.' p. 28, from Pashley), or one European language has here accidentally preserved the older sound [*sic*: but there is here some error in the text]. Considering the great rarity of this relation (cp. OHG. *ringi* under No. 168 [*ru-m-p-o* under Nos. 331, 341]) we may lay it down as a rule not readily to expect an *r* in the other languages, corresponding to a Sanskrit *l*. To admit this phonetic representation, the agreement in the other sounds of the word and in the meaning 555 must be very striking. This is e. g. by no means with the comparison, proposed by Christ p. 17, 'black,' a word moreover only quoted by grammarians

the etymon of *κόραξ*, with Skt. *kāla-s* 'blue-black.' The words belonging to *kāla-s* we collected under No. 46, those akin to *κόραξ* under No. 69.

Without entering more particularly upon the further differences of the several families of speech and individual languages on this point, we may add some remarks upon the relation of the Greek liquids to the Latin, and upon the variation between *ρ* and *λ* in Greek itself. The close kinship of the two South-European languages comes out also in this respect. For example, the relation of the Graeco-Italic rt. *melg* to *merg* (Nos. 150, 151) is significant. The Indo-Germanic rt. *marg* as early as the Graeco-Italic time split into two forms: *merg* (*ἀμέργω*, *ὁμόργ-νυ-μι*, *merga*) and *melg* (*ἀμέλγω*, *mulgeo*) and that in such a manner that the difference of meaning is just as clear as its original identity. As the northern languages have preserved only the form with *l*, it cannot be determined whether this division is not still older. — *χλό-η* (No. 197), *χλωρό-s* corresponds to the Lat. *hel-us*, *hol-us*, to the Lith. *žol-ė* 'cabbage,' *žāl-ie-s* 'green,' ChSl. *zeliže* 'holera,' Ir. *gel* 'white,' but to the Skt. *hár-i-s*, OHG. *grō-ni*. The *l* is therefore in this instance Graeco-Italo-Kelto-Letto-Slavonic. [But Fick 'Ehemalige Spracheinheit' p. 237 omits *grōni* and adds OHG. *gēlo*, *gēlaw-ēr* 'yellow,' adding 'the Arian base of this group is *har*, the European *ghal*, *ghel*']. — The rt. *άλφ* 'earn,' 'work' has at its side the Latin *lab* with an *l* (No. 398), while all the other languages, with the possible exception of the Lithuanian, show *r*. Under No. 468 we saw that the rt. *μαρ* (*μαραίνω*) appears with this sound in *mar-c-e-o*, while for the meaning 'fade' Skt. has the rt. *mlāi* or *mlā*, with which perhaps the German *welk* [used in English by Spenser and Milton] is connected. Here the Graeco-Italic peculiarity is shown in the preservation of the old *r*. Such an agreement is not, indeed, everywhere to be found. We compared *χάλαζα* (No. 181) with *grando*, *χελιδών* (No. 187) with *hirundo*, *κολεκάνος* (No. 67) with *cra-centes*, *βάρβαρο-s* (No. 394) with *balbu-s*, *στῆλ-τι-s* with rt. *σtop*, *στερ* (No. 227) in spite of the difference of the liquids. But these cases are rare, and as a rule we can detect some uncertainty in the liquids, either within the Latin language, as in the instance last-mentioned, where *strā-tu-s* occurs, or, as



with *λάκος*, *ράκος* (No. 86) in Greek itself. Thus though we have Gk. *κύκλος*-s (No. 81) corresponding to the Lat. *circu*-s, we find also *κίρκο*-s. We must compare *curvu*-s, not only with *κυλλό*-s, which belongs to the same root, but also with *κυρ*-<sup>556</sup>  
*τό*-s. In this case we have in Latin also the softer liquid in *clingere*, *cingere* (Fest. p. 56), which is derived from this root; to this form Dietrich called my attention in his review (Jahn's 'Jahrb.' 81, 40). Lat. *vellus* seems to come nearer to the Goth. *vulla* than to the Gk. *φέρο*-ν (No. 496), but by the side of this we have the more similar *οὔλο*-s. — On the other hand λ is predominant in Gk. *χολάδες*, *χόλιξ* (No. 199), compared with Lat. *haru*-*spex*, *hira*, but we have also the latter sound in Gk. *χορ*-*δή*. — Of the three forms *στλεγγί*-s, *στεलगί*-s, *στεργί*-s (No. 576) the last comes nearest to the Lat. *strigili*-s. The facts being such, the following rule holds good for the comparison of Greek words with Latin; that we are always to expect *r* for *r*, *l* for *l*; and that exceptions are only to be admitted when the probability on other grounds is especially great.

Finally, it has often been observed in ancient and modern times, that in Greek itself the two liquids are interchanged. The rt. *kar* 'call,' 'praise' (*kar* 2 in the 'Pet. Dict.') is represented on the one hand by *κηρ*-*υξ* 'herald,' an expansion from the stem preserved in the Skt. *kār*-*ús* 'singer of praises,' on the other by the widely ramified form *καλ* (*καλέω*) No. 29 b, which appears also as Italic, Teutonic, and Irish. In two widely extended stems the interchange of the liquids has actually made its way into the inflexion of verbs. The stem *ἐλ*-*θ* has been already mentioned under No. 661, and on p. 65 divided into *ἐλ* (Homer. *ἐλ*-*υ*) with the determinative *θ*. *ἐλ*-*θ* is to *ἐλ* as *φθι*-*θ* (*ἔ*-*φθι*-*θ*-*ο*-*ν*) to *φθι*. The *ν* is to be regarded as an anaptyctic vowel, like the *ε* of *νεμ*-*έ*-*θ*-*ο*-*ν**το*, *φλεγ*-*έ*-*θ*-*ω*, or the *ν* in *Τ*-*ύ*-*μωλος* = *Τμῶλος* (Lobeck 'El.' i. 477), and is found even in forms which, like *προσ*-*ήλ**υ*-*το*-*ς*, *ἔπ*-*ηλ**υ*-*ς*, are formed without *θ*. The rt. *ἐλ* may be regarded without hesitation as a later by-form of *ἐρ*, and corresponds to the Skt. *ar* 'go,' 'attain.' It is the same root which we met under No. 500 and in the forms there given as cognate.—The older form *ἐρ* underlies the present stem *ἐρ*-*χ*. The *χ* has arisen from the inchoative *σκ* in accordance with an analogy

to be further discussed on p. 701. ἔρ-χ-ο-μαι therefore means properly 'I begin to go,' and corresponds to the Skt. *arkh* 'attain,' 'fall to the share of' (Benf. i. 63), where the *kh*, likewise limited to the present stem, also goes back to *sk*, and enables us to deduce the Indo-Germanic form *ar-sk* (cp. Leo Meyer i. 345). — From the same root, by means of a determinative *s*, *er-s* was formed, Lat. *err-or* (for *ers-or*), *errare*, Goth. *airz-jan* *πλανᾶν*, Mod. Germ. *irren* (Benf. i. 62, L. Meyer i. 397). Joh. Schmidt 'Voc.' ii. 459 shows also the connexion with Goth. *ur-reis-an* and Skt. *arsh* 'flow.' We may add  
 557 *παλίν-ορσ-ο-s*, *ἄψ-ορ-ρο-s*. But we must keep distinct Gk. *ἔρρω*, because it shows clear traces of the digamma (*βέρρης* Ahr. 'Dor.' 46, *ἐνθάδε φέρρων* Θ 239, Knös 100). — On the other hand we cannot but refer *ἄλ-η* 'wandering,' *ἀλᾶσθαι* 'to wander,' *ἀλέη* 'avoidance,' *ἀλεείναι* 'avoid,' *ἀλεύασθαι* 'shun,' *ἡλεός*, *ἡλός* 'astray,' 'confused,' with *ἡλίθι-ο-s* 'foolish,' *ἡλ-ασκ-άζειν* 'stray,' 'escape,' and *ἀλάσ-τωρ* properly 'scarer,' 'driver,' then 'spirit of revenge' (cp. Keck on Aesch. 'Ag.' p. 18), to a rt. *ἀλ*, which is originally identical with *ar*, *ἀρ*, *ἐρ*, *ὀρ*, *ἐλ*. We can however hardly regard it as accidental, that the gliding sound should have attached itself just to the words with this signification. To *ἡλίθι-ο-s* I added also *ἡλ-ι-τ-ο-ν* 'I went wrong,' 'sinned,' which is connected in meaning, and the *τ* of which is justified as a formative element ('Greek Verb' p. 281). But certainly *ἀλιτεῖν*, *ἀλιτέσθαι*, *ἀλείτη-ς* *ἀλιτρό-ς* have in Homer a more energetic force. Hence the notion of Fröhde in Bezz. 'Beitr.' iii. 17 to connect the rt. *λιτ* (with prothesis *ἀ-λιτ*) with Goth. *sleitha* 'mischief,' *sleith-s* 'bad,' *ga-sleith-jan* 'damage' is worth consideration.

It is more difficult to analyse *αἰρέω* and *εἶλον*. The augment of the aorist leads us to infer an initial consonant ('Greek Verb' p. 85), so too *ἀπο-αἰρεῖσθαι* A 230, *ἀπο-αίρεο* A 275 compared with *ἀφαιρείται* A 182 and *φέλωρ*, *φελώρια*, as L. Bekker writes to avoid hiatus (A 4, E 684). In Alcaeus (Fr. 68) Bergk formerly read *ἐκφέλετο* instead of the senseless *ἐκ δ' ἔλετο* of the MSS., now (ed. 2 and 3) he has accepted L. Bekker's *ἐκ σ' ἔλετο*. Neither the one nor the other can be established. The meaning makes it dangerous to connect this stem with No. 659, for the notion is always that of grasping,



taking. It is certain on the other hand that the root of *αἰρέω* (which is doubtless for *ἀρ-j-ω*), is to *ἐλ* just as *ἐρ* is to *ἐλ*. And thus the form *ἀφαιλησέσθαι* is extremely remarkable: it is to be found now on a Cretan inscription ('De Inscript. Cretensi' scr. Rich. Bergmann: Gratulationsschr. des Brandenb. Gymn. zur Berliner Jubelfeier 1860), and forms the bridge between *αἰρέω* and *εἶλον*. From the cognate languages nothing corresponding has been adduced, except the Goth. *vil-v-an* 'rob' compared by Fick i<sup>3</sup>. 778, to which belongs also *vil-v-a* 'robber,' where the *v* recalls that of Lat. *vol-v-o*, Goth. *val-v-jan*. In meaning *ἐλωρ* corresponds most closely, as in Lat. *vol-tur*, *vul-tur* 'robber,' and the *ω* possibly has come from *φα*, so that in form too the word comes nearer to the Gothic form. — *καλύπτειν*, which on p. 539 was connected with *col-a-re*, can hardly be separated from *κρύπτειν*, as will be seen.

Besides these words we may also refer to *λεβίνθιοι* and *ἐρέβινθοι* (No. 494), rt. *κλυ* and *ἀ-κρο-ά-ο-μαι* (No. 62), to *ἀλκ* and *ἀρκ* (No. 7), *βλύω* and *βρύω* (Lobeck 'Rhem.' 23), *κείρω* and *κόλο-s*, *κελεῖς* (No. 53) and Lat. *cul-ter*, *μέλει* and *μέλλειν* and 558 *μέριμνα* (No. 466), *πόρκο-s* and *πλέκω* (No. 103), *τέλος* and *τέρμα* (No. 238), *χλουνός* and *χρυσός* (No. 202) and the deductions of Lobeck 'Path. Prol.' pp. 135, 279, 'Elem.' i. 502. *μεγαλ-ρειν*, 'grudge,' we may with Buttmann 'Lexil.' i. 259 derive from the st. *μεγαρο*, identical with *μεγαλο* (cp. τὸ μέγαρον)<sup>1</sup>.

#### D. Sporadic changes of the Spirants.

Nothing is so characteristic of the Greek phonetic system as the aversion to the spirants. Of all the consonants these are exposed to the most numerous and various changes. Since the change of an initial *σ* to the spiritus asper and the expulsion of *σ* between two vowels, the latter of which processes was probably preceded by the former, have been treated by us as regular phenomena, there remain only the two spirants *ν* and

<sup>1</sup> Bechtel (see note on p. 553) makes assimilation or dissimilation decide between *τ* and *λ* in polysyllables. Perhaps it was so with the Gk. suffixes *ρο* and *λο* (Lucian 'jud. voc.' § 4, gives *κεφαλάργία* for *κεφαλαργία*). But this is not saying much. No change in fact defies rules so much as that just discussed.

inscription of Arniadas (Cauer's delectus No. 23), l. 3, *Βακεύφα* (Boeotian, 'C. I. G.' 1639). Perhaps Hartel is right in assuming (p. 38) the converse of this, i. e. *Fv* for *v* in the case of the much discussed *τοῦ ἀφ' αὐτοῦ* on the inscription from Naxos ('C. I. G.' 10) in spite of Kirchhoff 'Stud. z. G. d. Alphab.' 73. The dialect which shows most such developements, both of *F* from *v*, and also of *v* from *F*, is the Cyprian. Thus we find *κατεσκεύφαξε*, *Εὐφ'αγύρω* (Deecke-Siegismund 'Stud.' vii. 222), which have as much right to be called midway forms between *σκευάζω* and *\*σκεφαζω* (written *σκεάζω*) as conversely *ἐφρητάσατν* (tablet of Idalion l. 4) a midway form between *ἐφρητάσατν* (ibid. l. 14) and a possible Lesbian *\*ἐφρητάσατο* (rt. *φερ*, *φρε* 'speak') which the analogy of *ἐφράγη* would lead us to expect. In the latter case a vowel analogous to the *F* attached itself naturally to the *ε*. The variety in the way of writing the word points to the fact that *v* can hardly have been a fully developed sound, but that we have here a case where affections of spoken sounds were imperfectly rendered in writing.

## 2. *o* or *ω* as a representative of the *F*.

The change of *F* into *o* or *ω* has at first sight the appearance of an anomaly, and for this very reason my assumption of this change has met with strenuous opposition especially on the  
 571 part of Hugo Weber ('Jahn's Jahrb.' 1863 p. 602, 1865 p. 550) and of Voretzsch in his work 'De inscriptione Cretensi' so often referred to. Hugo Weber's objections culminate in the words: 'since it appears that in Greek a *v*, i. e. *u*, has arisen from an old *o*, and not *o* from *v*, the supposition of a change of *v* or *F* to *o* is by this one fact shown to be baseless.' There is an error here. It is true that *v* is etymologically = *u*, but phonetically it is not. There can be no question that *v* arose in a comparatively late period of language from *u* by attenuation, and it is true that *v* has become the normal representative of the older *u*, and no one would think of expecting an ordinary *o* as the representative of this favourite sound. But the versatility of sounds rebels here, as elsewhere, against the narrow boundaries within which H. Weber wants to confine it. Even after the introduction of the later alphabet the sound *u* was never expressed by the originally diphthongal *ou*



with complete consistency. In countless instances the stonemasons still had recourse to *o*, which, especially in the Ionic dialect, must have come uncommonly close to *ov* in its pronunciation. Otherwise how are we to account for the contraction of *oo*, *oe*, and *eo* to *ov*? For Greek dialects we may conjecture that *v* retained more often the sound of *u*, and this is certainly the case, as Ahrens has shown, with Cyprian, a fact for which the above-mentioned phonetic developments have already prepared us. The change of an old *u* to *o* in this very dialect has been established, e. g. in *πέποσμαι* = *πέπυσμαι*, *ἐράτοθεν* = *ἐρήτυθεν* (Mor. Schmidt 'Ztschr.' ix. 366). That is to say, instead of the attenuation of the old *u* to *ü* that is customary in the other dialects, a different pronunciation is here introduced, which was at any rate very near to that of the *o*. — For the diphthongs *av* and *ev* (the subsequent change of which to *av* and *ev* necessarily presupposes an *au*, *eu* and not *aü* *eü*) we find the letters *eo*, and this *eo* the metre sometimes proves to be a true diphthong, e. g. *ἐμ φάρεσι λεοκοῖς* at the close of a hexameter (Keil 'Rhein. Mus.' xix. 258), and on the same inscription from Priene Keil fills up a gap as follows: *NA(O)ΛOXON*. On Samian inscriptions *av* and *ev* are consistently written *ao* and *eo* (Carl Curtius 'Inscr. z. Gesch. v. Samos' Lübeck 1877 p. 26) e. g. *ταοτα*, *έόνοιαν*, and this way of writing the sounds was very common in other Ionian towns as well in the third and fourth centuries B.C., as is pointed out by the same writer. Here too we must consider the writing of *eo* to be an attempt at representing to some extent the old *u* sound, in a case in which *ov* could not possibly be used. Since then, as we saw at p. 562, *F* had a sound apparently almost the same as an irrational *u*, why should we be surprised if, in a period in which the character *F* fell into disuse, 572 we occasionally find its place taken by *o*? — In *ὄγδοον* when used as a disyllable in Homer (see p. 536), *o* is phonetically half vowel, half consonant, like the *v* in *δακρύοισι* (σ 173). The sound of the *o* came almost as near to that of the semi-vowel *v* as that of the *v* did. This is also proved by the tolerably frequent transliteration (mentioned at p. 563) of the Lat. *v* by *o* in Latin words; e. g. the constantly occurring *Κόυντος* (also *Κύντος*, Lobeck 'El.' ii. 24, and *Κίντ*

῾Οαλέριος ('Inscriptions recueillies à Delphes' No. 17, l. 87). It took a considerable time for the cumbrous *ov* to establish itself in its place. This is enough to show, I think, that our hypothesis has a definite foundation after all. There is a difference between sounds which, like the *f*, began to disappear early, leaving however some traces behind, and those which remained in existence always. The former assume all sorts of different shapes. We must not cut everything after the same pattern, nor imagine that we can exhaust the changes of sounds in a few rigid formularies. The change of *f* to *o* has the clearest parallel in Old High German, e. g. *snēo* = Goth. *snaiv-s*, *falo* gen. *falwes*, where the oldest records have the *u* still. Here no doubt *o* arose immediately from *u*, but this applies to Greek as well, the only difference being that, as Greek had no simple character for *u* the intermediate step was never written.

After having thus examined generally the probability of this change of sound, which we assert, we must now apply the test to particular instances. We shall begin with a word of which hitherto no other tolerably credible explanation has been proposed: *δοάν* in Alcman (Bekk. 'Anecd.' 949, 20). This word has already been considered by Buttmann 'A. Gr.' i. 44 in its connexion with the lengthening of the vowel before *δήν* and *δη-ρόν* usual in Homer<sup>1</sup> (*οὐδ' ἄρ' ἔτι δῆν*, etc.), and referred to *δῆαν*, *δῆην*. With Benfey (ii. 209) and Leo Meyer ('Ztschr.' vii. 216) we consider this *δῆαν* as a shortened form of *διῆάν* the accusative from the stem *διῆα* 'day' = Lat. *die* for *dive* (No. 269). This stem can therefore be regarded as Graeco-Italic in the form *divā*. Sanskrit knows only *diva-m* (neut.) in the sense of 'sky,' 'day,' and *div*, *dju* (regularly masc. in the Vedas) with the dat. *div-é*, the instrumental *div-ā* 'by day.' That the notion 'a long time' can grow out of this stem is shown by the Lat. *diū* (cp. *inter-diu*) and the Skt. in-  
573 strumental plur. *dju-bhís* = *diu*. While Latin keeps both sounds only in *diū*, and elsewhere now the *i*, now the *v* (*u*) of this stem: *die-s*, *tri-du-u-m*, *dū-dum*, the *i* has disappeared in Greek without a trace, and the acc. *δῆάν*, *δοάν*, *δῆν*—properly 'a day long'—come into use as an adv., with which again *δηρόν*, *δηθά*, *δηναιός* are connected.

<sup>1</sup> Cp. now Hartel 'Homerische Studien' i<sup>2</sup>. p. 13.



The relation which *δοάν* bears to the Lat. *diem* seemed to be the same as that of the Homeric *δοάσσατο* 'seemed' to the imperf. *δέατο* (cp. No. 269). Hesychius's *δεάμην ἐδοκίμαζον, ἐδόξαζον, δέαται δοκεῖ* have received a remarkable confirmation from an inscription. The inscription of Tegea, edited by Michaelis (Fleckeisen's 'Jahrb.' 1861 p. 585), gives us the conjunctive to it *δέατοι*, the first time after *εἴ καν*, the second time after *δοα ἄν*. We can accordingly assume with certainty a middle verb *δέ-α-μαι* 'I seem,' the *α* of which, like that of *ἔρα-μαι*, is lengthened in the conjunctive (cp. *ἔραται* Pind. 'Pyth.' iv. 92, 'Gk. Verb' p. 318). The question arises how are we to connect these two synonymous verbal forms. My former view was that from *διφα* arose on the one hand by syncope of the *ι* *δφα* and subsequently *δοα*, which had a form *δοάσσατο* as *ἀγα* had *ἀγάσσατο*, on the other hand by expulsion of *F* *δια* and, on the analogy of forms to be discussed later, *δεα*, whence *δέατο*. It is clearly against this hypothesis that it supposes the same set of sounds to have been treated in two different ways. On the other hand Fick's interpretation (i<sup>3</sup>. 620) is recommended by its simplicity. He derives *δέα-ται* from the shorter rt. *δι* 'seem,' making it stand for \**δι-α-ται*. It is true he says nothing about *δοάσσατο*. It is possible that this aorist form may have belonged to a present \**δοάζω* formed from a nominal stem \**δοα* for \**δοια*, which last could have come from a rt. *δι* by addition of sound, just as the \**σκοια* we arrived at at No. 112 as an expansion of the rt. *σκι*. I therefore no longer regard this aorist as a certain instance of *ο=F*. — On *δοιοί* see p. 239.

Of *ζόασον σβέσον* (Hesych.) M. Schmidt's explanation is that *ζ* here represents the soft sibilant, which was usually denoted by the less appropriate character *σ*, while the *ο* like the *β* had its origin in the *F*. (Compare at the same time the form *ζείννυμεν σβέννυμεν* (Hesych.), which has lost the *ν* sound altogether.) But while many conjectures have been made of very different kinds about this root (particularly by Joh. Schmidt 'Ztschr.' xxiii. 300, Fick i<sup>3</sup>. 603 and now by Brugman 'Forsch.' i. 19) no relationship can be said to have been definitely established for it, and consequently the explanation that the *ο* has come from *ν* has only a certain

amount of probability in so far as both  $\sigma$  and  $\beta$  may have come from  $v$ .

The frog's croak  $\kappa\acute{o}\acute{\alpha}\xi$  corresponds to Eng. 'quack' and 574 Ovid's 'sub aqua, sub aqua maledicere tentant' ('Metam.' vi. 376). The Latin *coaxare* is perhaps only an imitation of  $\kappa\acute{o}\acute{\alpha}\xi$ . Just so the sucking pig's  $\kappa\omicron\iota\zeta\epsilon\upsilon\nu$  corresponds to Eng. *squeak* (Bohem. *kvič-e-ti* 'grunnire'). Windisch points out to me that by the Indians the frog's note is rendered by *akhhkala* ('Rig-veda' vii. 103, 3). — Cp. Etrusc. *Vilatas* = 'Οἰλιάδης, Jordan 'Krit. Beitr. Z. Lat. Sprache' p. 52.

Another case in point is the Cretan town  $\text{Ὀαῖος}$  (Ahr. 43, Boeckh 'C. I.' ii. p. 401), as Steph. Byz. calls it, whose inhabitants are called  $\text{Ἰαῖοι}$  on coins, while elsewhere the common form of the name is  $\text{Ἀῖος}$ . Apollon. Rhod. i. 1131 calls the country  $\text{Ολαῖς}$ , using, that is,  $\text{οι}$  to represent the  $F$  where he wants a long syllable, a diphthong which in his time differed but little from  $v$  in sound. Steph. Byz. gives  $\text{ἀγῆναι}$  (No. 654 b) as the etymon, and tells us that  $\text{ἀῖος}$  is the dialectic equivalent for  $\text{ἀγμός}$  'precipice,' 'breach.' In these words as in  $\text{Κόϊντος}$  the accent should be noticed, as it has found its way to the new syllable. To this view Hugo Weber and Voretzsch p. 7 oppose another, built mainly on the extraordinary form  $\text{ἸΑΥΞΙΩΝ}$  'C. I.' No. 3050. But this form actually occurs only in the subscription, while in the text, which is disfigured by extraordinary blunders, we find  $\text{ΞΑΥΞΙΩΝ}$  at several places. This  $\text{Ἰαυῖος}$ , we are to believe, arose from  $\text{Ἰά-Ἰαῖος}$  as also  $\text{Ὀαῖος}$ ,  $\text{Ἀῖος}$ . But in substantives, with the exception of onomatopoetic words, reduplication, and that too by means of the heaviest vowel  $\alpha$ , is by no means of so frequent occurrence that we may venture to assume it offhand; and the only support of this assumption is, as we see, not exactly a strong one, inasmuch as the Cretan inscriptions from Teos have all come down to us in a very imperfect form, and hence should be used cautiously for etymological purposes (cp. Ahrens 16). The  $\text{av}$  in  $\text{ἸΑΥΞΙΩΝ}$  might be the representative of a duller  $\alpha$  sound, as it must be taken to be in the Thessal.  $\text{δᾶυχνη}$  for  $\text{δάφνη}$  mentioned at p. 482.

The Locrian town  $\text{Οἰάνθη}$  or  $\text{Οἰάνθεια}$  is in Plutarch



also called 'Υάνθεια (Ross 'Lokr. Inschrift von Chaleion u. Oiantheia' p. 14). — Unless we are to regard 'Υ as a mere copyist's mistake, the easiest course is to explain the word to be *Fi-ανθη* 'violet-flower,' and hence the equivalent of the proper name 'Ιάνθη (No. 590), and even to derive *ύάκ-ινθο-ς*, with a twofold diminutive ending, from the same stem *Fio*.

In the place of the forms 'Οίλεός, 'Οίλιάδης recommended by Aristarchus, Zenodotus (Düntzer 'De Zenod. stud.' 50) read 'Ιλεός, 'Ιλιάδης, and this was the form used by many later writers, especially by Stesichorus. It is certain that here too the primary form was *Fίλεός*, which is easily explained by *Fίλη* 'troop' (p. 564). The *ο* in this name, which is established for Homer by the metre, proves the antiquity 575 of the change of *F* to *ο*.

The relation of *οίσ-ύ-α*, *οἶσο-ς* to *Fίτέα*, *Fίτυς* has been already discussed at No. 593. No one ever heard of *ι* changing to *οι*, hence *ο* must stand for *F*.

Perhaps the same stem may be traced in the name of the Lacedaemonian town *Οἶτυλος* variously written *Βείτυλος*, *Βείτουλος* (Ahrens 'Dor.' 46). It is clear at any rate that the *O* and the *B* here arose from *F*.

The Thessalian 'Ολοσσών, later 'Ολοσσόνες — cp. Lob. 'El.' i. 471 — probably owes its double *ο* to a *F*. Cp. No. 527.

The name of the Cretan town 'Ολισσών with the by-form *Βλισσών* ('Ahr.' 50) seems to contain an initial *ο* of the same kind. Cp. note on No. 544.

On finding the same small Sicilian stream called now *Ἀνις* now *ᾠανις* we are inclined to believe here too in a form *Fανις*. In Pindar 'Ol.' v. 26 there is certainly a hiatus before the *ω* too, and this seems to point to a consonantal initial. There is no objection in the lengthening of the vowel that has arisen from *F*, which we should have to suppose took place later.

We may finally mention *ῥυζα* 'rice.' It is clearly a borrowed word, and, as is recognized by Pott ii<sup>1</sup>. 168, and Benfey i. 87 (cp. Hehn<sup>3</sup> 438), seems not so much directly to resemble the Skt. *vr̥h̥t̥-s* (m.) in sound as to be an attempt at reproducing a related Persian form which has a sibilant instead of *h*. It is worth noticing all the same as a proof

that the Greeks tried to express a foreign *v* too by *o*. Pictet i. 273 gives the Afghan *urishi* which also has a vowel in the place of *v*. The Gk. by-form *δρινδα* comes nearer to the Armen. *brinz* and the Mod. Pers. *birinj*.

In a few remaining cases it is more difficult to decide whether *o* has come from the simple consonant *f*, or from the syllable *of*. *ἀλοάω* 'thresh' must be related to *ἄλευ-ρο-ν* (No. 527), which gives us the stem *φαλεf*. From this seems to have arisen *φαλοf-η*, then, with lengthening to compensate for the loss of the *f*, *φαλω-ή* and *φάλω-s* (cp. *πλώω* for *πλοf-ω*), and so too the noun-stem *φαλοf-ια*, whence *ἄλο-ιά-ω* (I 568 *ἀλοία*) and *ἄλο-ά-ω* are derivatives. — The case is the same with *γάλω-s*, for which under No. 124 we gave *γαλ-νο-s* as the primary form. The *ω* seems to point here too to *of*, whence too *γαλό-ωs* for *γαλοf-ο-s*, so that we here regard *o* as an auxiliary vowel introduced between *λ* and *f*. — On the other hand there are no such indications in the triple stem *όλοο* in *όλοόφρων* (No. 555), where *όλοο-s* corresponds  
576 to the Lat. *salvu-s*, *όλοοί-τροχο-s* (No. 527), where it corresponds to the Lat. *volv-ere*, and *όλοό-s* 'destructive' from the still obscure rt. *όλ* (*όλλυμι*), lengthened *όλ-ε* (*όλε-θρο-s*), hence possibly from *\*όλε-fο-s*. The forms *σολf-ο*, *φολ-fο*, and *όλ-fο* are just as possible as *σολ-ο-fο*, *φολ-ο-fο*, and *όλ-ο-fο*.

### 3. *ι* as the representative of *f*.

Christ p. 193 ff. assumes that *f* is vocalized to *ι* to a large extent. Since *ι* is near akin to the *υ* which often represents *f*, this change has at all events some credibility at first sight. But it disappears at once if we consider that *f* did not pass immediately into *ι* but into *υ*, and this would necessitate the assumption of a threefold change — to *υ*, then to *ι*, then to *ι* — if we were to go so far as to assume for *f* the last metamorphosis. Moreover in most of the cases it is possible to find another explanation of the *ι*.

In the first place, as far as the initial *ι* is concerned, we must at once separate from among the words adduced by Christ the proper names *ἰάνειρα* and *ἰάνασσα*, since both admit of explanations from other sources, and since the *f*



of ἀνήρ (No. 422) has no authority; and again *ἱέραξ*, since *βάρβαξ* which he compares with it, appears in Hesych. not, as Christ says, as a Lacedaemonian, but as a Libyan word, and accordingly has no weight whatever in any question of Greek etymology. At the same place we read *ἱαρείον* πρόβατον, βούς, Who can doubt (cp. Ahrens 'Dor.' 115) that *ἱαρείον* = *ἱερείον* in the sense of 'hostia' is the right reading? In the case of other words it remains doubtful whether the *ι* is not rather a reduplication (instead of *Fi*), e.g. in *ι-ωγ-ή* 'protection from the wind' (cp. *ἑδ-ωδ-ή*, *ι-ω-ή*), which at all events Lobeck is right (Prolegg. 307) in putting under the rt. *φαγ* (p. 542). It will hardly be advanced against this that in the only passage in Homer in which the word occurs (§ 533) there is no trace of an initial *F*. The same is the case with *ι-ουλο-ς* 'sheaf,' which Christ does not mention, by the side of *ούλος*, whence Demeter got the names *Ιουλώ* and *Ούλώ*, clearly from the rt. *φελ* (No. 527), and with *ιουλο-ς* 'earth-worm,' a word of like origin, which belongs immediately to *ύάλη*, *εύλή* discussed on p. 564, again with *ιῶλκα*, *αὔλακα* (with the by-forms *ἄλοξ*, *ῶλξ*, *ὄλοξ* No. 22), with *ιωρός* in which the meaning *φύλαξ* *οἴκου* connects it at least probably with *ούρος* (rt. *φορ* No. 501). There remains then only *ι/ακχος* by the side of *βάκχος*. But Bergk ('Griech. Literatur' in Ersch u. Gruber's 'Encyklopädie' 1, Section 81 p. 315) regards *ι/ακχος* too as reduplicated, for *Fi-φακχο-ς*, so too Savelsberg 'De dig.' 24, where attention is called to the Homeric *ἀ-νίαχοι*, *ἄ-ηχος* and other indications of a rt. *φαχ*. Cp. *βα-βάκ-τη-ς* *κραύγαστος*, *ὄθεν καὶ Βάκχος* Hes.

In the middle of a word the case is different. The 577 language of Homer presents several instances in which *ι* stands in the place of a faded digamma. But here too the question must be asked in each case whether it is really a change of *F* to *ι* that has taken place. In the case of many of the words adduced by Christ the answer must be a decided negative. For instance, the *ι* in *ἀ-δελφε-ιό-ς*, where the stem *δελφν* (p. 479) appears as *δελφεF*, belongs without a doubt to the derivative termination, and the same may be said of the *ι* in *κα-ί-ω*, *κλα-ί-ω*, *δα-ί-ω* ('burn'), since everything inclines us to regard the *ι* as a lengthening peculiar to

the stem of the present tense. This accounts for *καύσω*, etc. It is extremely probable that the same is the case with the Epic forms *θείειν*, *πλείειν*, *πνείειν*, of which at least the second finds an analogy in a kindred language: ChSl. *plov-ja*, Lith. *pláu-ju* (No. 369). — In other words too the *ι* is a part of the stem, e.g. in *οἰ-ωνό-ς* which we must explain not by *ὀ-ωνό-ς* but by *ὀφι-ωνό-ς* (No. 596). — In the related *ὤ-ϊ-ο-ν* it is hard to say whether *ο* or *ιο* is the suffix, but the Argive form *ὤβεον*, i. e. *ὠφιο-ν* (No. 597), proves that the *ι* was already in existence before the loss of the digamma. — Schleicher (Hildebrand's 'Jahrb.' i. 407) refers *ζειά* to the primary form *jav-ja*, so too Sonne 'Ztschr.' xiii. 430, who on account of the accent of the suffix *-ιά* rightly compares it to that of the collectives, e.g. *ἀνθρακ-ιά* (Van. 757). On the supposed forms *εῖως*, *τεῖως* it is enough to refer to No. 606. The trochaic *HEOΣ*, *TEOΣ* Bekker ('Hom. Blätter' i. 227) prefers to write *εῖος*, *τεῖος* because before *ο* and *ω* *ει* is the Homeric lengthening of *ε*. But *ῆος*, *τῆος*, with the long vowel that had existed from the beginning, find support in *ῆός*. In the adverb as in the noun *εῖως* (No. 613) the short vowel is the later. — It is less often that the diphthong *οι* grows out of *ο*. The history of writing does not help us to explain this. But *πνο-ιή* by the side of *πνοή* might be explained by *πνοφ-ιη*. More difficulty attends the unique form *ἀγνοιῆσι* (*ω* 218), where the *ι* seems to have no *raison d'être*. Perhaps it is the result of a mere poetic license after the pattern of *εἰλατίνη* for *ἐλατίνη*, *εἶατο* for *ἐ-ατο*. To the same class belongs especially *οἰ-ετής* for *ὀ-φετής* (No. 210) by the side of *αὐετής*. I do not think we are here dealing with actually living forms any more than in the case of Aristarchus's reading *οῖες* by the side of *δῖες* (— *υ υ ι* 425), i. e. *ὀφι-ες*, for I can see no warrant for assuming a form *\*ὀφι-ς* due to epenthesis. In this, as in other questions, there is no chance of arriving at clear views without taking into consideration the conventional character of the Homeric language, which, after a long life of oral tradition in the schools of the bards, was fixed in a written form by scribes who were perfectly conscious of  
578 their task, and not subjected to any scientific criticism till the time of the Alexandrian grammarians. Here if any-



where the need appears of pursuing linguistic and literary studies hand in hand.

Strictly speaking then there is — as Ebel too decides (Fleckeisen's 'Jahrb.' 83 p. 84) — *no* proof of a phonetic change of *F* to *ι*. When occurring in the middle of the words adduced — and their number might easily be increased (e. g. by *λείουσιν* No. 543) — the *F* can claim no other effect than that of having caused a lengthening of the preceding vowel, after it had fallen out itself. Such words belong accordingly to the same class as *ῥείδῃ* for *ῥ-Feίδῃ*, *βασιλῆ-ος* for *βασιλέF-ος*, treated of by Ebel 'Ztschr.' iv. 171 and Brugman 'Stud.' iv. 130 ff. It is there clearly shown that the length in such cases is variable, the loss of the semi-vowel being compensated by the length now of the preceding, now of the following vowel (*βασιλέως*, *ἑάλων*). Cp. Rumpf in Fleckeisen's 'Jahrb.' 1860 p. 682. Also *πλώ-ω*, *χωό-μενος*, *χώ-ννυ-μι* (No. 203), *ρώ-ω* and the like, by-forms to the rts. *πλυ*, *χυ*, *ρύ*, owe their existence to a similar lengthening, which however is here accompanied by a dulling of the vowel. Perhaps we must assume old forms *πλου-ω*, *χου-ω*, *ρου-ω* in which *ου* acted as an augmented *υ* instead of the usual *ευ*. *ω* bears the same relation to an *ου* of this kind that the traditional Doric, and, in the sense of shield, Homeric *βῶ-ς* bears to *βοῦ-ς* (Ahrens 'Dor.' 166). We have already (p. 575) assumed the same to be the case with *ἄλω-ς*, *ἄλω-ή* and *γάλως*.

#### b. PREFIXED VOWELS AS WITNESSES TO A DIGAMMA.

In the place of the old labial spirant we often find an *ε*, more seldom an *α*, now and then the two side by side in the same word in different dialects, e. g. Cretan *ἄερσα*, Homeric *ἔερση* (No. 497), Skt. *varshá-s*. In order to decide the question, whether such a vowel arises, as was formerly assumed, *out of F* in the same way as the *u* and *o* we have just discussed, or as is now generally recognized to have been the case, was originally prefixed to the *F* and then kept its place after the *F* disappeared, in other words, whether the order of the forms was *Φερσα ἄερσα* (*ἔερση*) or *Φερσα ἄΦερσα* (*ἔΦερση*) *ἄερσα* (*ἔερση*) it will be necessary first of all to make a survey of all existing forms of the kind.

The following are probably the only examples of *α* as the initial letter of digammatized words:

*ἀεθλο-ν* (No. 301), as is there shown, from a rt. *Feθ*.

579 *ἀείρω*, which, as we showed at No. 504, comes from a rt. *Feρ*.

*ἀέξω* by the side of the Skt. *vaksh* No. 583.

*ἀερσα* No. 497.

*ἀῖτυρο-ν ὕαλος* (Hesych.) I connected in the 'Quaestiones etymologicae' p. iv. with the Lat. *vitru-m* (No. 282), holding it to be the vulgar Graecized form of the Latin word. M. Schmidt 'Ztschr.' ix. 400 calls this comparison in question, explaining the gloss in Hesychius to be a mistake for *λίγυρον*, a rare by-form of *λυγγούριον*, *λιγγούριον* 'amber.' But what is there to show that, by the side of the names for a shining mineral body beginning with λ, given by Schmidt, this transformed foreign word might not occur in some dialect or other as a name for glass? Latin words are of common occurrence in Hesychius.

*ἄλοξ* (No. 22), the Attic form of the Homeric *αὔλαξ*, *ᾠλαξ*, Dor. *ᾠλαξ*, in Hesych. *δλοξ*, without doubt from the rt. *Feλκ* 'draw,' and hence probably for *ἀ-Flοξ*.

*ἀν-ἀεδνο-ς* (I 146, 288, N 366), where Bekker now agrees with Benfey in reading *ἀν-ἐφεδ-νο-ς*, and *ἀν-ἀελπτο-ς* (Hesiod 'Theog.' 660) we may, with Christ 213, place here, though the *α* as a representative of the *ε*, which is elsewhere usual in the case of these stems, looks suspicious, moreover we find *ἀνα-* in forms which do not admit of this explanation, e. g. *ἀνάπνευστος* (Hes. 'Theog.' 797). Cp. No. 420 and Gust. Meyer 'Zur Geschichte d. indogerm. Stammbildung' (Leipz. 1875) p. 11.

The far more frequent *ε* is discussed by Lobeck 'El.' i. 55 ff. The words and forms belonging here are the following:

*ἔαγμα*, interpreted by Zonaras by *σύντριμμα*, i. e. 'fracture,' 'bruise,' and preserved by Suidas in the form *αἶγμα*, along with *ἐγκατέακτος* (Lob. 'El.' i. 59) from the rt. *Feγ* 'break' (p. 542).

*ἔδνα* or *ἔδνα* constantly in Homer, cp. No. 252, by the side of the less frequent *ἔδνα*.

*ἔειδόμενος* Pind. 'Nem.' x. 15 and the aor. *ἔεισάμενος*, *ἔεισα-*



μένη in Homer from the rt. Fιδ (No. 282). Cp. Bekker 'Hom. Bl.' i. 156.

είκοσι No. 16.

ἐειρόμενος only in the 'Certamen Hom. et Hesiod.' p. 319, 9 (Goettling) in the sense of 'asking.' At No. 493 we saw that ἐρέσθαι 'ask' had no F. Here then the ε must be the result of a mere imitation of older forms that were not understood. Cp. the following page.

ἐέλδομαι (Ξ 276), ἐέλδεται (ε 210), ἐέλδεται (N 638), ἐελδό-μενος (α 409), ἐελδομένω (μ 438), ἐελδομένοισιν (H 4), ἐέλδωρ (A 41 etc.). The rt. Fελ-δ is to be regarded as an expansion of Fελ = βολ (No. 659).

ἐέλσαι (Φ 295), inf. aor. to rt. Fελ (No. 660).

ἐέργει (B 617, I 404 etc.), ἐέργουσιν (λ 503), ἐεργόμενοι (N 525) rt. Fεργ (No. 142).

ἐέρση by the side of ἄερσα just mentioned (No. 497).

ἐΐση (No. 569).

ἐόργη with the by-form εὐέργη, given by Pollux vi. 88 among culinary utensils, and interpreted by τορύνη, i. e. 'ladle, 'stirrer' (*tudicula*), together with its derivative ἐοργῆσαι τορυνῆσαι (ib.) and ὀργάζειν 'knead,' are placed correctly by Lobeck 'El.' i. 63 with ἐργάζεσθαι, and hence under our rt. Fεργ (No. 141). The by-form εὐέργη belongs to the examples of F vocalized to υ discussed above (p. 566 f.). The same root appears in connexion with quite another meaning in παν-οὔργο-s, where the ου may be explained from παν-εοργο-s, and hence likewise from a form with a prothetic ε, though possibly from παν-οοργο-s for παν-φοργο-s.

ἐορτή (Herod. ὀρτή) is shown by the irregular augment of its derivative ἐορτάζω (ἐώρταζον) to belong here. The connexion with ἔρδω however, conjectured by Lobeck 'El.' i. 63, is quite inadmissible, because the δ of ἔρδω arose out of γ (No. 141). If it could only be proved that, as Sonnet 'Ztschr.' xiii. 442 conjectures, ἐ-ορτή stood for Fεφορτη, we should have to take another view of the ε. Cp. below p. 587, where, with Fick i<sup>3</sup>. 771, we shall try to establish for it the rt. var occurring in the Skt. vra-tā-m 'holy work.'

The forms συν-ε-οχμό-s 'joint' and ἐ-εχ-μένη συνεχομένη

(Hesych.) have been already mentioned under the rt. *Fex* (No. 169).

*ἀπ-εωστό-ν* ἀπωθητόν, as we ought probably to read the interpretation in Hesych. instead of ἀπόθητον, is a fresh trace of the *F* in the rt. *όθ* besides those given at No. 324.

At p. 36 we expressed the belief that Roth was right in regarding the *η* in ἡ-ίθ-εο-ς (rt. *vidh*) as lengthened from a prothetic *ε*.

Since in post-Homeric times the *ε* of these words was regarded as a mere pleonasm, it is not surprising that this sound should have been introduced by mistaken imitators of an apparent license, in stems which show not a trace of a *F*, as especially in ἐέδμεναι (Empedocl.) rt. ἐδ (No. 279), ἐέσχατος explained by Suidas as ὁ ἔσχατος, belonging to ἐξ (No. 583 b), ἐνέεικον ἤνεγκον, ἐνεείκω ἐνέγκω (Hesych.),  
581 mentioned at No. 424. Formations of this kind must be regarded as mistakes of the poets; they were certainly never incorporated into the living language. We expressed a doubt at No. 599 whether the same was the case with εἶς (Hesiod 'Theog.' 145). The form occurs again in the Anthology, and Herodian περὶ μνημάτων λέξεως p. 18 mentions it.

It almost looks as if aberrations of this kind cannot be excluded even from the Homeric poems. The more carefully they are examined in reference to their dialectic peculiarities, the more do they assume an appearance of a vast patchwork — some of the stuff very old, some new<sup>1</sup>. I. Bekker says in the 'Hom. Blätter' i. p. 156 note 'although εἶσατο and ἐείσατο "went" seem also to have the digamma.' The facts are as follows. In εἶμι, ἰών, ἔπεισι, etc. there is never any but a vowel initial. On the other hand out of the 16 verses in which the middle forms εἶσομαι, εἶσατο occur, 7, either by a hiatus (ἐπιείσομαι *Λ* 367, *Υ* 454, ἐπεισαιμένη *Φ* 424, καταείσατο *Λ* 358), or by a prefixed *ε* (ἀντ' Αἴαντος εἶσατο *Ο* 415, τὸ μὲν εἰσάσθην *Ο* 544, cp. *Χ* 89) seem to point to a consonantal initial; and to these cases 4 may be added in which the hiatus might after all find an excuse in the bucolic caesura (διαπρὸ δὲ εἶσατο χαλκός *Ε* 538, *Ρ* 518, *ω* 524, cp. *Δ* 138). Two passages are neutral, because the verse begins with

<sup>1</sup> Cp. A. Leskien 'Studien' ii. 68.



εἶσομαι, εἶσατο, and only 3 are against the digamma (πάλιν εἶσομαι Ω 462, δεῦρ' εἴσεται ο 213, μεττεισάμενος Ν 90). We may add Apollon. Rhod. ii. 372 the perfect form δια-ειμένος (? cp. Buttmann 'Ausf. Gr.' i<sup>2</sup>. 541). Now are we on this account to separate these forms from the others of precisely the same meaning belonging to the rt. *í*, and connect them, say, with the Skt. rt. *vī* 'go,' 'drive,' a course which is easy to advise, but hard to defend? Or ought we not rather to assume that the bards themselves, having no fixed rule for the use of the *F*, which was for them already half obsolete, were misled by the false analogy of εἶσατο ('seemed'), and put in the *ε* before εἶσατο ('went') as well, where it suited the verse, and allowed the hiatus from the same reason? The latter seems the more probable to me.

We now come to the main question, — how are the vowels *α* and *ε* in the forms above collected to be regarded? The best explanation the older school of grammarians had to give was that of πλεονασμός or πρόσθεσις (Lob. 'El.' i. 56). In later times Hoffmann has maintained decidedly ('Quaest. Hom.' ii. p. 10) that *F* was changed into the vowel *ε*. This is much the same as Bopp's view ('Vgl. Gr.' ii<sup>2</sup>. 105): at all events he talks of a melting into *ε* in the middle of the word τεοῖο. But the majority of modern grammarians are 582 of the opposite opinion, that *α* and *ε* are prefixed vowels after which the spirant did not fall out till later, a view held especially by Buttmann 'Lexilogus' i. 145 f., Giese 285, Ahrens 'Dor.' 257, I. Bekker 'Homer. Blätter' i. 133, where comparison is made with 'the *e* prefixed in Romance languages for the sake of ease of pronunciation (*escalier, espada*),' Savelsberg 11, Pohl 21, Rumpf in his elaborate review of Bekker's Homer in Fleckeisen's 'Jahrb.' 81, p. 680 ff., Schleiher 'Compend.'<sup>2</sup> 219. Christ adopts a middle course (196), and regards the *ε* as a prefix when it is at the beginning of a word, and as a transformed *F* when it is in the middle. There would be no great wonder in the change of *F* into *ε* — through the medium of the vowel *u* perhaps — especially if we imagine the *e* to be half mute, like that which has arisen in innumerable cases from an old *u* in OHG. and NHG. But the *α* could hardly be explained as a metamorphosis of the

*υ*, since it is without doubt farthest removed of all vowels from the region of the lips. Therefore after mature consideration of the question I am now decidedly in favour of the second of the above solutions. The following are the main grounds for my decision. In certain cases we can be quite sure that an *α* or *ε* was prefixed to the *Ϝ*, because the old digamma still exists after these vowels in the form of *υ*, e. g. in *αὔληρον* and *εὔληρα* (p. 568), in *εὐιάδες ἄμπελοι* from the *rt. Ϝ<sub>1</sub>* (cp. p. 564), in *αὔλαξ*, i. e. *ἄ-Ϝακ-s* (p. 579). It is accordingly clearly proved that a prothetic *α* and *ε* were prefixed to a *Ϝ* as well as to liquids and nasals, as in *ἀλείφω* No. 340), *ἐρυθρός* (No. 306), *ἐλαχύ-s* (No. 168), *ἀμεύω* (No. 450). It is probable too that some forms, in which at first sight *Ϝ* seems to have been transposed from the beginning to the middle of the word, are to be explained in the same way. Even Buttmann whose sound keen judgment seldom forsook him in these questions, connects ('Lexil.' i. 146) the Homeric *εὔκηλο-s* (No. 19) with the likewise Homeric form *ἔκηλο-s*, assuming an intermediate form *ἐ-Ϝεκ-ηλο-s*, whence by syncope *ἐϜκηλο-s*, and, by vocalization of the *Ϝ*, *εὔκηλος*. Hugo Weber's objections to this view (Fleckeisen's 'Jahrb.' 1863 p. 608) fail to convince me that it is mistaken. If, as we see, the acute accent fell in *ἔ-εδνα*, *ἔερσα*, *ἔαγμα* on a syllable which arose at a later time under the influence of phonetic tendencies, why could not this happen in the case of *ἐ-Ϝκηλο-s*? and if an accented vowel can disappear from the end of *παρά*, *κατά*, *ἀνά*, why not from the middle of a word as well? (Cp. 'Stud.' iv. 223 ff.) *εὔκηλος* has moreover been influenced probably by the analogy of *εὔ* (cp. *εὐαδεν*). — On the other hand, in the case of the forms *Ϝα* and *ἄϜ* (No. 587) there is much to show that both forms existed from a very early period side by side. — On *αὐξ* we may refer to Nos. 159, 583, 583 on *αὐδ* by the side of *ἄϜεδ* and *vad* to No. 298. — In *οὐρανός*, which at No. 509 we identified with the Skt. *Váruṇa-s*, I cannot regard it as proved that we have a transposition of *Ϝop-avo-s*. Windisch regards *\*var-vanas* as the primary form; in that case *οὐρ-ανό-s* and the Dor. *ὠρανό-s* would have arisen from *ὀρ-Ϝανο-s* (cp. *κούρη*, *κώρα* from *κόρϜα*).

If then it is an established fact in the first place, that for



certain forms the assumption of a prefixed vowel is a necessity; if, in the second, a vowel of the same character creeps in before other consonants as well, at the beginning of words, under precisely similar conditions; if, thirdly, forms arrived at on the analogy of these furnish us with a simple explanation of the forms which actually occur, we may venture, I think, to regard this explanation as established, and consequently to deny that *F* was ever actually changed into  $\alpha$  or  $\epsilon$ .

c. *F* TRANSFORMED TO OTHER CONSONANTS.

1.  $\beta$ .

There can be no doubt that of all the usual marks left in Greek by a vanished *F* none denoted a sound more nearly approaching to the sound *w* in English than  $\beta$ . It is true that, when the Greeks began to write in their own character Roman names and words,  $\beta$  was as yet by no means the universal and complete representative of the sound given to it by the modern Greeks, as may be seen from the fact that  $\beta$  always stood for the Latin *b*, and conversely *b* for  $\beta$ , while on the other hand  $\beta$  was only partially used — i. e. alternately with *ov* and *o* — to denote the Latin *v*. But  $\beta$  must always have had a sound that was near to the interlabial spirant, and in the course of time became identical with it. Since our grammarians and lexicographers all belong to a time in which the softening had become pretty general, it is often quite impossible to decide whether a  $\beta$ , which they have handed down to us, is merely the written representative of the labial spirant, or whether the actual sound of the spirant has been hardened to that of the kindred explosive. In order to be sure of our footing, we shall always apply ourselves first to such words and forms as we know to have been actually used in old times, and then proceed to those which, given possibly by lexicographers according to their pronunciation, perhaps are witnesses rather to the preservation than the change of the spirant. Words which are decidedly given as Doric or Aeolic we shall omit altogether, since we have nothing essential to add to 584 Ahrens's exhaustive treatment of the subject ('Aeol.' 33 ff.,

'Dor.' 44 ff.: cf. Voretzsch 'De inser. Cret.' p. 5). It is beyond question that in early Greek  $\beta$  had not the same sound as  $F$ , for we are expressly told of a change of  $F$  to  $\beta$  before  $\rho$  even in Alcaeus and Sappho, in whose texts  $F$  was written before vowels. Nor have we any reason to assume that, when the Attic dialect was at its best, the sound of the old  $F$  was actually retained intact in that part of Greece, in the form  $\beta$ . On the contrary there is no doubt that in such cases we have to do with a hardening of the  $F$  to the explosive, a process which finds countless analogies in the Teutonic languages. For instance in NHG. after  $l$  and  $r$  an old  $w$  becomes  $b$ : *Schwalbe*, *Farbe* = OHG. *swalawá*, *farawa* (Grimm 'Gr.' i. 525). In Old Irish it is a question whether the  $b$ , e. g. in *tarb* 'taurus' (OGall. *tarvos*, OCymr. *taru* later *tarw*), *berbaim* 'I boil' (Lat. *ferveo*), *fedb* 'widow' (Lat. *vidua*, Cymr. *gweddw*), really stands for the medial and not the spirant  $v$  which has found unmistakeable expression in the modern forms *tarbh*, *bearbhaim*, *feadbh*. Stokes 'Beitr.' viii. 308 is decidedly of the latter opinion, cp. 'Gramm. Celt.<sup>2</sup>' p. 54 ('aut servavit aut resumpsit'). From the standpoint of Mod. Irish the spirant would also have to be assumed in the OIr. *bar n-* 'your' beside *far n-*, which belongs to the Goth. *iz-vara*. Only in individual words like the OIr. *bran* 'raven,' which bears so remarkable resemblance to the ChSl. *vranŭ*, where however Cymric also has a  $b$  (cp. *cic-bran* 'corvus carnis' Z<sup>2</sup>. 888), the medial has not yet been called in question. As an instance from the Romance languages we may give the Veronese *dobia* (= *jovia*, Ital. *Giovedì* 'Thursday').

A minute investigation will show that there exist in Greek, at all events within a considerable range, distinct phonetic inducements to this change. It is no mere chance, I believe, that the  $F$  has specially often undergone this transformation before or after  $o$  or  $v$ .  $o$  and  $v$  are the vowels most nearly related to the  $F$ . Just as the Romans showed their dislike to the combinations *vu* and *uv* among other ways by changing the spirant into  $b$ , e. g. in *ferb-ui* from the stem *feru* and in *bub-ile* for *bov-ile*, so the change of  $Fo\lambda$  (Lat. *vol-o*) to  $\beta o\lambda$   $\beta o\lambda o\mu a i$  (No. 659), with which change may be compared that of  $Fo\lambda\acute{o}e i s$  ( $\acute{O} \lambda o\acute{u} s$ ) to  $B o\lambda\acute{o}e i s$  ( $B o\lambda o\acute{e} n\tau i o i$ )



on the Cretan inscription edited by Voretzsch, seems likewise to arise from dissimilation, whence we then at once get an explanation of the relation of  $\beta\omicron\lambda$  to  $F\epsilon\lambda\delta$ ,  $\acute{\epsilon}F\epsilon\lambda\delta$ . — Of the same kind is  $\theta\acute{\omicron}\rho\nu\text{-}\beta\omicron\text{-}s$  the connexion of which with  $\theta\rho\acute{\epsilon}\omicron\mu\alpha\iota$ , 585  $\theta\rho\acute{\omicron}\omicron\text{-}s$ ,  $\theta\rho\tilde{\nu}\lambda\omicron\text{-}s$  is brought out at No. 317. The  $\omicron$  originates in the  $\acute{\alpha}\nu\acute{\alpha}\pi\tau\nu\xi\iota\varsigma$  often before mentioned; the suffix we may conjecture to be  $-Fo = \text{Lat. } vo$  ( $cl\tilde{u}\text{-}vu\text{-}s$ ,  $sal\text{-}vu\text{-}s$ ), which here became  $-\beta\omicron$ . — Lobeck 'El.' i. 72 conjectured that  $\acute{\iota}\beta\nu\xi$ , the name of an  $\delta\rho\nu\epsilon\iota\omicron\nu$   $\kappa\rho\alpha\kappa\tau\iota\kappa\acute{\omicron}\nu$ , together with the proper name  $\acute{\iota}\beta\nu\kappa\omicron\varsigma$  were connected with  $\acute{\iota}\nu\zeta\epsilon\iota\nu$  'scream' ( $\acute{\iota}\nu\gamma\acute{\eta}$ ,  $\acute{\iota}\nu\gamma\mu\acute{\omicron}\varsigma$ ). The intermediate step would be the stem-form  $\acute{\iota}F\nu\gamma$  (otherwise Fick ii<sup>3</sup>. 204). —  $\kappa\lambda\omega\beta\acute{\omicron}\text{-}s$  'cage,' dim.  $\kappa\lambda\omega\beta\acute{\iota}\omicron\nu$ , is no doubt connected with the st.  $\kappa\lambda\tilde{\alpha}F$ , i. e. with  $\kappa\lambda\eta\text{-}\acute{\iota}\text{-}s = cl\tilde{a}n\text{-}i\text{-}s$  (No. 59). —  $\kappa\omicron\lambda\omicron\beta\acute{\omicron}\text{-}s$  'mutilated'<sup>1</sup> (in use from Xenophon onward) which has also the same meaning as the Homeric  $\kappa\acute{\omicron}\lambda\omicron\text{-}s$  and is evidently connected with the Homeric  $\kappa\omicron\lambda\omicron\acute{\upsilon}\text{-}\omega$  'mutilate' (No. 114), is without a doubt formed like  $\acute{\omicron}\lambda\omicron\acute{\omicron}\text{-}s$  (No. 555) =  $sal\text{-}vu\text{-}s$ . In the verb the digamma has become a vowel, in the adjective it has changed to  $\beta$  under the influence of the following  $\omicron$ . From the rt.  $\sigma\kappa\omicron\lambda$  deduced at No. 114 is formed first  $\kappa\acute{\omicron}\lambda\omicron\text{-}s$ , then  $*\kappa\omicron\lambda\omicron F\omicron\text{-}s$ , and later  $\kappa\omicron\lambda\omicron\beta\acute{\omicron}\text{-}s$ , which bears to the shorter form the same relation as the Lat.  $amb\text{-}ig\text{-}vu\text{-}s$  does to  $prod\text{-}ig\text{-}u\text{-}s$ , and then finally the verb  $\kappa\omicron\lambda\omicron\acute{\upsilon}\text{-}\omega$  (perhaps for  $\kappa\omicron\lambda\omicron\sigma\tilde{\jmath}\omega$ , Schleicher 'Comp.'<sup>2</sup> 779), which is related to the stem of the adjective as  $\beta\alpha\sigma\iota\lambda\epsilon\acute{\upsilon}\text{-}\omega$  is to  $\beta\alpha\sigma\iota\lambda\epsilon\nu$ ,  $\mu\epsilon\theta\acute{\upsilon}\text{-}\omega$  to  $\mu\epsilon\theta\nu$ . — The forms  $\mu\acute{\omicron}\lambda\nu\text{-}\beta\omicron\text{-}s$ ,  $\mu\acute{\omicron}\lambda\iota\text{-}\beta\omicron\text{-}s$  have been discussed at No. 552, where the words of the same meaning from the related languages with a  $w$  are given. To these I add  $\mu\omicron\lambda\beta\acute{\iota}\text{-}s = \mu\omicron\lambda\nu\beta\delta\acute{\iota}\text{-}s$  from Hesych. On an inscription from Kamiros in Rhodes published by Newton in the 'Transactions of the R. Society

<sup>1</sup> Fick i<sup>3</sup>. 812 connects  $\kappa\omicron\lambda\omicron\beta\acute{\omicron}\text{-}s$  with the Skt.  $kharb\acute{a}\text{-}s$  'mutilated,' 'damaged,' 'crippled' with the by-form  $kharv\acute{a}\text{-}s$ , which the 'Pet. Dict.' puts first. It is quite plain that the root of these two words is the same, i. e. that  $khar$  corresponds to the assumed  $\sigma\kappa\omicron\lambda$ . But I cannot believe that the vacillation between  $b$  and  $v$ , so common in Skt. has any historical connexion with the Greek change between  $f$  and  $\beta$ , and still less that in Gk.  $f$  is to be regarded as a weakening of  $\beta$ . Rather we ought to assume the suffix to have been  $-va$ .

of Literature,' vol. xi. (New Series, June 1878) we read at l. 10 περιβολιβῶσαι, i. e. 'make fast with lead.' The β points to a form \*βλιβ or \*βλυβ (cp. *plumb-u-m*) with an inserted vowel. — δλ-βo-s was set down at No. 555 as the abstract substantive to δλοό-s = *salvu-s*, in the sense of *salū-s*. This is supported by the accent, for δλβo-s : δλοό-s = θερμη : θερμή. This etymology, which agrees with the remarks of Lobeck 'Rhem.' 111, seems to deserve precedence over the earlier ones both in respect of sound and meaning. — δροβo-s was recognized at No. 494 to be identical with the Lat. *ervu-m*. The change to the medial has here the analogy of the MHG. *erbiz*, NHG. *Erbse*, OHG. *araweiz*. The derivative 586 ἐρέβ-ιvθo-s probably owes its β to the primitive form of the word. — The change of F to β is to be seen particularly plainly in the Corcyraean form δρβos ('C. I.' No. 1909) by the side of δρFo-s (OPCOΞIAPOΞ) on another inscription from the same island discussed by Wachsmuth in the 'Rhein. Museum' xviii. 575 and Bergmann 'Hermes' ii. 139 (Kirchhoff 'Zur Geschichte des Alphabets' 93). The Ionic οὔρος to which we may now add the Theraic οὔρορ ('Mittheil. des archaeolog. Inst. in Athens' ii. 77), is related to δρFos as νεῦρο-ν (above p. 568) is to *nervu-s*. — We may also, with Hugo Weber (Fleckeisen's 'Jahrb.' 1863 p. 608), put with these the not very numerous nouns in -αβo-s (fem. -αβη). κάρα-βo-s 'beetle,' κάννα-βo-s 'mould' (from κάνναι 'reed' according to Lobeck 'Proleg.' p. 268), Ἑκά-βη (I. Bekker 'Hom. Bl.' i. 292) very likely were originally of the same formation as ἀγα-υό-s, κερα-ό-s (*cervu-s*), κρανα-ό-s, ταλα-ό-s<sup>1</sup>.

The Lacedaemonian ὠβά, the name of a division of the country, also belongs here. That the β in this word represents an older F is proved by the by-forms ὠγή· κόμη (with γ to represent the F), ὠας· τὰς κόμας (cod. κόμας), οὐαί· φυλαί, Ὁα, Ὡη, Οῖη an Attic deme, οῖη = κόμη in Apoll. Rhod. ii. 139 (M. Schmidt 'Ztschr.' ix. 366), οἰητή-s· καμήτης Soph. 'Fr.'

<sup>1</sup> For many of these formations Conr. Zacher 'De nominibus Graecis in -aios,' assumes loss of an ι (p. 13 sqq.). We cannot always arrive at a definite criterion. The suffix -va, however, both for primary and for secondary adjectives is as clearly established in Skt. as the -uo and -vo in Latin.



130 N. The Homeric *ὑπερ-ώϊο-ν* may also be naturally connected with these words. Since there is not a trace here of an initial digamma — for the Cretan *ὑπερβώϊα* given by Pott is the name of a festival (Franz 'Elem. Epigr.' 210), which does not belong here at all — or of a *σ* in the middle of the word, and since it is uncertain how we ought to regard the *β* of the Laconian word, the connexion with the Skt. *vas* mentioned at No. 206 is doubtful. Among the dialectic forms collected by Ahrens we may add to our present list *ἀκροβᾶσθαι*, *ὀρούβω*, *ὥβεια* = *ῥά*, *ἐξωβάδια* = *ἐνώτια*. In *ὀρούβω* the spirant, which we should have expected in the place of *β*, whether as a matter of mere writing or of pronunciation as well, has developed just as in *βούβ-αλο-ς* (p. 478) and in the forms given on p. 570. To these we may add the proper name *Εὐβανδρος* from the inscriptions published by Karapanos ('Dodone et ses ruines.' sixième catégorie No. 3). *β* is here as in the Cypr. *Εὐφαγόρας*, only a sign for the *w*-sound naturally developed out of *υ* before a vowel.

In Lesbian Aeolic *F* before *p* regularly became *β* (Ahrens 34): *βρόδο-ν*, *βρίζα*. The same change occurs at least in <sup>587</sup> some words in ordinary Greek. *βρέχω* was referred at No. 166 b to a rt. *vragh*. — *βρά-σσω*, *βρά-ξ-ω* 'boil,' 'ferment' with the substantives *βράσ-μα*, *βρασμός-ς*, used also for the sea-surf and especially in *βραστή-ς* of earthquakes, forcibly reminds us of the Slavo-Lettic verbs of cooking and boiling: ChSl. *vr-ě-ti* 'fervere,' *vrěnije βράσμα*, *iz-vir-a-ti βράζειν*, *varŭ καῦμα*, *var-i-ti πέττειν*, Lith. *vŕ-ti* 'cook,' 'boil,' *vŕ-ti-s* 'whirlpool,' 'eddy' (Lex.). From a rt. *Fap* might come by metathesis *βpa*, and by expansion by *τ* *βρατ-ῖω βράσσω*, like *ἐρέσσω* from *ἐρ ἐρετ* (No. 492). Cp. Corssen 'Nachtr.' 222. So that probably *Βρασίδα-ς* meant 'Hot-head.' The name of the Cretan hero *Βρασίλα-ς* would be better explained by the rt. *βρατ*, corresponding to the Lat. *vert* 'turn,' and occurring perhaps in *βρατ-άνη* by the side of *ῥατ-άνη* 'ladle.' In that case the word would mean 'Turner of the people,' *Τρόπαιος*. With this rt. *var* 'boil' the OHG. *wal-m* 'fervor,' *wal-î* 'tepor' is connected. I do not see how to establish phonetic connexion with *βρύ-ειν* 'boil' or 'bubble up,' though in meaning it comes as near to our present root as the Carlsbad '*Sprudel*'

('bubbling spring') does to *Vary* the oldest name for Carlsbad. — We may, with some approximation to certainty, place *βρέτας* here, as I have already done in the note to Overbeck's essay in the 'Transactions of the k. s. Ges. d. Wissensch.' 1864 p. 248. If we take *-τας* to be the suffix, which bears the same relation to the *-τος* of *κύ-τος*, *κῆ-τος* that *ας* (*τέρ-ας*, *γέρ-ας*) does to *ος* (*γέν-ος*, *τέλ-ος*), we are left with *βρε* as the root, and it is extremely probable that this is identical with the same *var* 'guard,' 'watch,' from which at No. 501 we derived on the one side *ὄρᾱν*, *οὔρος*, and on the other *vereri*, *revereri*. We have a decided proof of the early application of the rt. *var* to the worship of the gods in the Skt. *vra-tá-m* 'sacred act,' 'vow,' Zd. *varena* (m.) 'faith,' with which Pictet ii. 692 connects the Slavonic word for 'faith' ChSl. *věra πίστις*, *věriti πιστεύειν*. Accordingly *βρέ-τας* might mean 'something worshipped,' a very apt name for this the oldest name for the image of a god. We are tempted to place here also the word *ἐοπτή* (for *ἐ-φορ-τή*) noticed on p. 580. Its proper meaning would then be 'worship.' The by-form *ἐροτι-s* (prob. for *ἐ-φορ-τι-s*) discussed by Ahrens 'Aeol.' 158 is not against this<sup>1</sup>. —

588 *νεβρό-s* 'fawn' (Pott ii<sup>1</sup>. 235, Benfey ii. 51), ought no more to be separated from *νεαρό-s*, i. e. *νεφ-αρό-s* 'young' than the Lat. *pullu-s* from *puer*, or *juven-ca* from *juven-i-s*.

The influence of the *λ* is unmistakeable in the stem *βλαστ* (p. 549), the relation of which to the Skt. *vardh* has been clearly explained.

The influence of the preceding *σ* is perhaps the explanation of the *β*, not only in *σβέ-ννυ-μι* which was above (p. 573)

<sup>1</sup> As far as the meaning goes there is much to recommend Bugge's comparison of *βρόχ-o-s* 'noose,' 'cord' with the Lith. *vėrž-ti* 'to tie,' *viržys* 'cord,' OHG. *wurgian* (Germ. *würgen*) 'strangle,' ON. *urga* (f.) 'cord' ('Ztschr.' xx. 25). Cp. Fick i<sup>3</sup>. 774. But in that case we should be obliged, as Bugge himself points out, to separate the Lith. *vėrž-ti* from the Gk. \**férgw*, *εἶργω* (No. 142) and several words from other languages there collected. The assumed rt. *vragh* is nowhere to be clearly seen. There is also nothing to be said against the older conjecture that *βρόχο-s* belongs to *laqueus* (for \**vlaqu-eu-s*). On these grounds I leave the question undecided.



connected with ζόασον, but in φλοῖσ-βο-ς from the st. φλοιδ (No. 412 e), and perhaps in the proper name Θίσ-βη as well, if it really is connected with the rt. θες (p. 520 note). Otherwise Pott W. i. 999. Still more clear is the relation of ἀλίσ-βη· ἀπάτη (Hesych.) to the st. ἀλιτ (cp. p. 557) ἀλιταίνω, ἀλείτης; ἀλίσ-βη then is probably for ἀλιτ-βη. — ἐπίβδα 'the day after the festival' and proverbially used for 'the morrow' (τραχεῖαν ἐρπόντων πρὸς ἐπίβδαν Pind. 'Pyth.' iv. 140), is conjecturally referred by Pott W. i. 29, who follows in the track of the old explanations (Hesych., Lobeck 'Paralipp.' 221), to \*ἐπιβάδα. But neither \*ἐπιβάδης nor even ἐπιβαίνειν is ever to be found in the sense of 'succeeding.' The following day is ἡ ἐπιούσα. Benfey's conjecture (ii. 71), that the word comes from ἱβδη 'plug,' is not at all a probable one. Hence we get warrant for the conjecture that ἐπί-βδα arose by metathesis from ἐπι-διφα, i. e. the same st. διφα 'day,' which we arrived at on p. 572 for δοά-ν, corresponding to the Lat. *die-s*. We met with another trace of this stem at No. 269. Thus ἐπί-βδα would be the next day, just as ἐπίδαιτρον is the after meal, β arising by assimilation from F. The metathesis may be explained by the disinclination of the Greeks and Italians to the combinations δF, δβ.

After deducting the words just discussed, in which it appeared that there were phonetic grounds to be found for the hardening of the F, we are left with but few words in which it seems probable that the same change took place. To these belongs ἀμείβω by the side of the Dor. ἀμεύ-ω (No. 450), which, as I conjecture, arose from ἀμεF-jω and perhaps owes its β to the influence of the j. — βίκο-ς (Eustath.), βικ-ιο-ν· κύαμος corresponds to the Lat. *vic-ia* (Pott i<sup>1</sup>. 120), perhaps also to the synonymous Lith. *vikí-s*, Bohem. *vika*, *vikev*, unless these are borrowed from the Germ. *Wicke* 'vetch,' and consequently indirectly from the Lat. *vicia* (Hehn<sup>3</sup> 193, 435). Since the word is expressly declared not to be Attic, and is not quoted from any but late authors, the β here is less surprising. — ἥβη 'youth,' 'youth's pleasures,' whence ἡβά-ω ἡβά-σκ-ω, ἡβη-τήρ-ιο-ν, ἐν-ηβητηρίο-ν 'place of amusement,' ἔφ-ηβο-ς, etc. were connected, first, I think, by Pott i<sup>1</sup>. 113, with the Skt. *júvan* = Lat. *juven-i-s* (*juven-cu-s*, *juven-ca*,

*jūn-ix* or *juven-ix* Plaut. 'Mil.' 304 R.), OCymr. *ieuanc*,  
 589 OIr. *óac* 'juvenis,' Goth. *jugg-s*, Lith. *jáuna-s*, ChSl. *junǫ*  
 'young.' He explained the  $\eta$  from the Skt. comparative  
*jáv-ījas*, superl. *jáv-ishtha-s*. The Zd. *yavan* = Skt. *jávan*  
 also belongs to the latter forms. Benfey ii. 210, Leger-  
 lotz 'Ztschr.' vii. 298, Christ 152 follow him in this. We  
 must assume a pre-Greek *\*jāv-ā*, or perhaps *\*jāv-jā*. The *a*  
 belongs to that higher phonetic stage which is called in Skt.  
*Vṛddhi*, and bears to the *a* of *jáv-ījas* the same relation that the  
 $\eta$  of  $\beta\eta\sigma\sigma\alpha$ , i. e.  $\beta\eta\theta-j\alpha$ , does to the *a* of  $\beta\alpha\theta\acute{o}-s$ , or the  $\omega$  of  $\phi\alpha$   
 'fleece' to the *o* of  $\delta\acute{o}s$  = Skt. *ávi-s*. It should be noticed  
 that even the Dorians usually retain the  $\eta$  in this stem  
 ('Ahr.' 151). There was, however, a *Ἀβαῖον* in Aegina (Kekule  
 'Hebe' p. 3). This happens in a few other cases, in which  
 either the stem-syllable itself originally contained a diphthong  
 with *i*, as is the case in  $\eta\kappa\omega$  rt.  $\iota\kappa$  (No. 24 c, cp. 'Greek Verb'  
 p. 394),  $\delta\eta-\lambda\omicron-s$  rt.  $\delta\iota F$  (No. 269),  $\eta\rho\omega-s$  related to the Skt.  
*vīrá-s* = Lat. *vir*, Goth. *vaír*, Lith. *výra-s*, or an *i* appears  
 in the next syllable, as is the case in  $\eta\mu\iota-$ ,  $\kappa\rho\eta\pi\acute{\iota}-s$ ,  $\mu\eta\tau\iota-s$ ,  
 $\pi\eta\kappa\tau\acute{\iota}-s$ , or may be assumed to have existed, as in  $\eta\sigma\sigma\omega\upsilon$ .  
 Cp. Schrader 'Stud.' x. 319. Since then in  $\acute{\alpha}\mu\epsilon\acute{\iota}\beta\omega$  we  
 ascribed the hardening of the *F* into  $\beta$  to the influence of the  
 originally succeeding *j*, perhaps the simplest solution of the  
 difficulty in the case of  $\eta\beta\eta$  is to assume *\*jāv-jā* to have been  
 the primary form. On the suffix *jā*, which is widely spread  
 over all the Indo-Germanic languages, cp. Bopp 'Vgl. Gr.'  
 iii<sup>2</sup>. 336. Sonne 'Ztschr.' x. 176 ventures quite a different  
 etymology of  $\eta\beta\eta$ , but it can hardly be correct, Fick i<sup>3</sup> 492  
 again another, connecting the word with  $\acute{\alpha}\beta-\rho\acute{o}-s$ . This is  
 inconsistent with the meaning, as is rightly maintained by  
 Bezenberger 'Beitr.' ii. 190, though he in his turn only  
 substitutes for it the still far bolder assumption that it  
 belongs to the Lith. *jėg-ti* 'to be able.'—On  $\phi\lambda\acute{\epsilon}\psi$ , stem  
 $\phi\lambda\epsilon\beta$  from  $\phi\lambda\epsilon F$ , cp. p. 302.

In the case of several other stems, for which this transition  
 has been assumed, it must be decidedly rejected, especially in  
 $\beta\acute{\alpha}\zeta\omega$  'speak' (fut.  $\beta\acute{\alpha}\xi\omega$ , cp.  $\beta\acute{\alpha}\xi\iota-s$ ), where the rt.  $\beta\alpha\varsigma$  can  
 have nothing to do with the Skt. *vad*, in  $\beta\alpha\lambda\beta\acute{\iota}-s$  'threshold,'  
 'barrier,' 'battlement' which belongs to the rt.  $\beta\alpha$  (cp.  $\beta\eta-\lambda\acute{o}-s$



'threshold,' *βαθμί-s*, etc.) and is as far as can be from the Lat. *val-va* 'folding door,' in *βί-α* 'force,' the root of which we saw above (No. 639) to be  $\beta_1 = \mathfrak{r}_1$ , in which  $\beta$  therefore is in no case to be traced to the *F* of *fi-s* Lat. *vi-s*. With the whole of this section cp. Leo Meyer i. 86.

## 2. $\mu$ .

That the labial spirant can change to the labial nasal has been often maintained since Pott i<sup>1</sup>. 223. The comparative study of languages has on this point adopted the doctrine of 590 earlier grammarians of a pleonastic  $\mu$ , reviewed by Lobeck 'El.' i. 114. Bopp 'Vergl. Gr.' i<sup>2</sup>. 38 mentions this change. According to Benfey i. 89 the change of *v* to *m* is 'common and well known,' Legerlotz 'Ztschr.' vii. 135 knows of 'a dozen or so' of words, in which the change takes place; Christ p. 98, 181 ff. gives more than a dozen or so, and Leo Meyer i. 87 about a dozen. Savelsberg 'De dig.' 31 comes very near to my views on the subject. Fick 'Ztschr.' xx. 174 denies this change for ordinary Greek, and Hugo Weber in Fleckeisen's 'Jahrb.' 1863 p. 608 and 'Philol.' xvi. 687 will not allow it at all. On general grounds it is impossible to deny the relationship of the two sounds, though of course it by no means follows from this that they were actually exchanged the one for the other. On looking round for analogies we find, as I am told by my former colleague Dillmann, that in the Semitic languages *m* passes into *v*, and the same change may be perceived in the Teutonic languages. It is doubtful whether the South- and Mid-German dialectic *mir* for *wir* has changed *w* to *m*. Still Schweizer gives a few other instances ('Ztschr.' xii. 309) from German dialects of *m = v*, e. g. *munzig = winzig*. Conversely the Czechish river *Vltava* has become *Moldau* in German. In the Keltic languages every *m* between vowels becomes *v*, or at least gets a pronunciation like that of *v* (Z<sup>2</sup>. 42, 114). The Lith. *vidù-s* 'the inside,' *vid-ù-i = μέσσοι*, *vidurý-s* 'middle' was connected at No. 469 with *μέσο-s*, *mediu-s*, though with a (?) on account of the Slavonic form with *m* and the fact that it is an isolated representative (cp. Fick xx. 174). Since such relations exist between the sounds *v* and *m* there is nothing essentially absurd in the assumption

of a change of the one to the other. Whether or not such a change actually took place will entirely depend on the question whether we can find a list of words containing the two letters, the meaning of which admits of a natural connexion between them.

If we take the Greek words that fall into this category in the order of probability, we shall most naturally begin with *ἀμ-νό-ς*. It seems to me very probable that Benfey i. 116 is right in connecting this with *δῖς* = Skt. *ávi-s* (No. 595). It corresponds exactly to the Lith. *ávina-s* 'wether.' Consequently *ἀμ-νό-ς* stands for *ἀφι-νο-ς* (cp. *λαγ-ι-νό-ς*, *παιδ-νό-ς*) and means properly *ovili-s*, whence the transition is easy to the meaning 'lamb.' The preservation of the *α* in contradistinction to *δῖ-ς* finds an analogy in the Lat. *avilla*<sup>1</sup>. The  
 591 change of *φ* to *μ* may here be explained to be due to the influence of the following *ν*, and we shall have to assume *β* as the intermediate stage (cp. *σεμ-νό-ς* by the side of *σέβομαι*).

We must here place a number of words, in which without doubt an initial *μ* confronts a clearly established initial *φ*, and in which the meaning also presents no obstacle to the connexion of the two forms. *ἀλέ-ω* 'grind,' along with *ἄλευρον* 'meal' and the other related words, have been discussed at No. 527, i. e. have been assigned to the rt. *φελ*, *φαλ*. If then we have good grounds for assuming a form *φάλευρον*, we have to choose, in reference to the well authenticated *μάλευρον* = *ἄλευρον* (cp. Stephan. 'Thes.' sub voc., Schmidt ad Hesych. iii. p. 67) between two courses: either with Buttmann 'Lexil.' i. 195 we must derive the rt. *ἄλ*, *φαλ* from an older *μαλ*, and consequently identify it with No. 481 Lat. *μυλ mol-o*, Goth. *mal-an*—against which view it is especially to be urged that it is very unlikely that the *φ*, a sound never a favourite with the Greeks, should have ever taken the place of another, least of all of the very convenient and common *μ*—or we must here allow of the change of *φ* to *μ*. For it seems to me hardly possible to

<sup>1</sup> Fröhde's view (Bezzenb. 'Beitr.' i. 327), that *av-illa* is a diminutive of *ag-nu-s* I cannot adopt. Just as little can I agree with Fick ii<sup>3</sup>. 13 that *ἀμνό-ς* and the Lat. *agnu-s* find a connecting link in *\*ἄβνο-ς*. For Labialism only occurs before vowels (cp. above p. 459). To *agnu-s* however belongs the ChSl. *agnīcī*.



conceive, in the third place, that different Greek dialects, perhaps, had formed for one and the same idea two words of such peculiar formation, resembling each other in all but the initial, from two utterly unconnected roots. Hugo Weber, who is fond of believing in such marvellous freaks of chance, has only one reasonable objection to urge to my view, i. e. that the *F* of ἀλέω ἄλευρον is not positively established. But does it not constantly happen that we have no doubt of the existence of this sound, though every trace of it has disappeared? — μαλλό-*s* 'tuft of hair,' corresponds exactly to the meaning of the Lat. *villu-s* and of the unquestionably related *vell-us* (cp. πηγεσί-μαλλο-*s*), which latter words were compared at No. 496 with the Gk. οὔλο-*s* 'curly,' Goth. *vulla* and Fério-*v*. It follows that μαλλό-*s* stands probably for *Fa*λλο-*s*, though it is true that very discrepant views are held with reference to the word μῆλον 'sheep,' which is not far removed from μαλλό-*s*. Fick 'Ztschr.' xx. 176 connects μαλλό-*s* with μαλακό-*s* (No. 457) and the Lith. *mila-s* 'wool-stuff.' Jac. Grimm 'Gesch.' 33 compares the word with the ON. *smali* 'pecus,' *smal* 'parvus' in the sense of 'small cattle,' in favour of which might be adduced the OIr. *mil* 'small animal.' Hugo Weber 'Etym. Unters.' 82 with μᾶλό-*s*, μαλλό-*s* 'white,' 'shining' (cp. μῆλοπα καρπὸν η 104), Pott derives it from a rt. *ma* 592 'resound,' whence too *μηκᾶσθαι* (W. i. 266). In any case I do not see how to connect μαλλό-*s* with μῆλο-*v*, for the word really means 'tuft,' for all that Hugo Weber says to the contrary, and is so used Aesch. 'Eumen.' 45, and hence the epithet δρακοντό-μαλλοι ('Prom.' 799) applied to the Gorgons and μαλλω-τό-*s* χιτῶν. The use of the word for 'fleece' as a whole is clearly secondary. — μελδόμενος has in Hesych. besides the explanations μέλδων, τήκων, φθίνων, which all come from μέλδειν 'melt,' that of ἐπιθυμῶν as well; so too μέλδει, besides τήκει, ἔψει, φθίνει, has ἐπιθυμεῖ. M. Schmidt doubts the correctness of the reading in the latter point. There is no external reason for such a doubt, and hence, though the meagreness of the authority makes us cautious, we venture to compare *Fελδ*, ἐελδ (cp. p. 580; cp. ἔλδομαι ἐπιθυμῶ, ἔλδεται ἐπιθυμεῖ, ἐέλδεσθαι ἐπιθυμεῖν, etc. Hesych.). Max Müller ii. 331 holds ἔλδ-ο-μαι to be a shortened form of μέλδ-ο-μαι and

derives the latter from the rt. *μελ* (*μέλει*). But it is difficult on this view to account for *ἐέλδ-ο-μαι*, which points to a *F*, nor is there any precedent for the loss of an initial *μ*. — With *μολπίς* *ἐλπίς* the case is precisely the same. Here too Hesychius is our sole authority. As there is no definite reason for doubting him<sup>1</sup>, and *ἐλπίς* certainly had the *F*, we put *μολπίς* by its side at No. 333. M. Schmidt, who notices *ῥλπα* *ῥ ἐλπίς*, contents himself with saying ‘falli videtur G. C.’ and at ‘Philol.’ xi. 397 throws doubt on *ῥλπα* as well. But what can we do with such rare forms except assign to them the place which phonetic analogy directs? There is, at any rate, no more rashness in this, than in altering the text by daring conjectures, when there is rarely ground for safe emendation. Of course no one can deny that here, as in a hundred other cases, there *may* be a copyist’s blunder. — We may also record here an example of *μ* for *ν* in the middle of a word. *ἄμφην* *αὐχὴν* was formerly only known through Hesych., but had been already connected by Ahr. ‘Dor.’ 503 with the Aeol. form *αὐφὴν* mentioned at p. 482. M. Schmidt was for emending this too. But meanwhile it has been found in the newly discovered poem of Theocritus v. 28: *χρή με μακρὸν σχόντα τὸν ἄμφενα ἔλκειν τὸν ζυγόν*. The form teaches us much about the Aeolic pronunciation of the diphthong *αν*, which apparently was not very different from *αν*. Here the change is clearly, as in *ἀμνός* and in the MGk. *ἐλάμνω* = *ἐλαύνω* (Mullach ‘Vulgarspr.’ p. 90), the result of assimilation. Still Joh. Schmidt ‘Vocal.’ i. 182 gives an entirely different explanation of it: he takes *ἀγχήν* to be the primary form and compares this with the  
593 OHG. *ancha* ‘neck.’ If we took *ἀγχ* to be the root, the *φ* of *αὐφὴν*, *ἄμφην* might be defended by the arguments used on p. 481 f., but the diphthong *αν* could not be accounted for at all.

In the case of a second group of words we must be more chary still. *μίτο-ς* ‘thread’ is connected by Lobeck ‘El.’ i. 115 with *ἰτέα νῆμεν*, the root of which is undoubtedly *ι*, *viere* (No. 593), a conjecture, but nothing more. — *μόσχο-ς* ‘sprout,’ ‘twig,’ ‘rod,’ and *ῥσχος* (also *ῥσχο-ς* and *ῥσχη*) *ἀμπέλου κλάδος κατάκαρπος* (Athen. xi. p. 495) not used, it seems, till late in the general sense of ‘twig.’ Several etymologies are possible

<sup>1</sup> [Cp. however J. B. Bury in ‘Hermathena’ No. xi. p. 269].



for the former word (cp. A. Weber 'Ztschr.' v. 234). It is easy to connect  $\delta\sigma\chi o-s$  with  $\delta\zeta o-s$ , of which it might be the diminutive (for  $\delta\zeta-ισκο-s$ ), but  $\delta\zeta o-s$  is itself of doubtful etymology. For if we refer  $\delta\zeta o-s$  to  $\delta\sigma-\delta o-s$  ( $\sigma\delta$  being transposed to  $\zeta$ ) we get a form which agrees with the Goth. *ast-s*, but I cannot see how the  $\delta$  is to be explained. Fick's conjecture (i<sup>3</sup>. 504) that the words belong to the Skt. rt. *as* 'throw,' 'shoot' (cp. a 'shoot') is ingenious but bold. Bezzenberger ('Beitr.' iv. 359) connects  $\delta\zeta o-s$  with the Lith. *ĩgis* 'growth,' 'shoot.' — The homonymous  $\mu\delta\sigma\chi o-s$  'calf' has (Leo Meyer i. 87) been connected with *vacca* and the Skt. *ukshán* 'bull,' under the assumption that the Latin word presupposes a form *vacsa*, the Indian word a form *vaksan*. But if the 'Pet. Dict.' is right in connecting the latter with the rt. *uksh* 'besprinkle,' it will suit neither *vacca* nor  $\mu\delta\sigma\chi o-s$ . It seems better with Fick and others to compare *vacca* with the Skt. *vaśá* 'woman,' 'cow,' mentioned at No. 19. —  $\mu\theta\nu\lambda\epsilon\upsilon\epsilon\iota\nu$  and  $\delta\nu\theta\lambda\epsilon\upsilon\epsilon\iota\nu$  'stuff,' 'adulterate,' are exactly synonymous. Their origin is however obscure, and of the digamma there is not a trace. — It sounds as if  $\mu\eta\rho\acute{\upsilon}-\omega$  ( $\mu$  170  $\iota\sigma\tau\acute{\iota}\alpha \mu\eta\rho\acute{\upsilon}\sigma\alpha\nu\tau o$  'they drew the sails together') was originally identical with  $\acute{\epsilon}\rho\acute{\upsilon}\omega$  'draw.' But the comparison becomes extremely doubtful when we find on further investigation that the special meaning of  $\mu\eta\rho\acute{\upsilon}\epsilon\iota\nu$  is 'twist,' 'wind' (Theocr. i. 29  $\kappa\iota\sigma\sigma\delta\varsigma \mu\alpha\rho\acute{\upsilon}\epsilon\tau\alpha\iota \pi\epsilon\rho\acute{\iota} \chi\epsilon\acute{\iota}\lambda\eta$ ), that the substantives  $\mu\acute{\eta}\rho-ιν\theta o-s$  and  $\mu\acute{\epsilon}\rho-μ\iota(\theta)-s$  'cord,' 'thread,' cannot possibly be separated from it, and that we find for  $\mu\acute{\eta}\rho\iota\nu\theta o-s$  a by-form  $\sigma\mu\acute{\eta}\rho\iota\nu\theta o-s$  as well, while  $\acute{\epsilon}\rho\acute{\upsilon}\omega$ , though it shows traces enough of the F, has neither the meaning 'wind' nor an initial  $\sigma$ , nor the same vowel. — Bugge's remarks ('Ztschr.' xx. 4) on the relation of  $\mu\omicron\rho\phi\acute{\eta}$  to the Vedic *várpa-s* 'image,' which are supported by the 'Pet. Dict.,' are at all events not convincing.

There is more uncertainty still about a third list of words, which for the most part admit with equal probability of entirely different etymologies. That e. g., as Christ 182 maintains,  $\mu\acute{\alpha}\lambda\alpha$  (cf.  $\mu\alpha\lambda\epsilon\rho\acute{o}-s$ ) is identical with the Skt. *vara-s* 'eximius,' is extremely doubtful. We might with at least equal probability connect it with the Lat. *val-ē-re* and the Skt. *bála-m* 'strength,' *bál-ishṭha-s* 'fortissimus' and the ChSl.

*vel-ij*, *vel-ikū* 'magnus' (cp. Pott W. i. 561). Since however two distinct conjectures of equal probability are mutually destructive, we are content with regarding the comparative *μᾶλλον*, i. e. *μαλιον*, as the correlative to *melius*. — *μειραξ* 'girl,' later 'boy' as well, *μειράκιον* 'boy,' both with diminutive endings, Christ 257 (cp. Lobeck 'El.' i. 114) and Leo Meyer i. 87 connect with the Laconian *εἶρην* (st. *εἶρεν*), the name at Sparta for youths of twenty and upwards. But the latter word, whose forms are discussed by O. Müller 'Dorians' ii. 296, shows no trace of *F*. Cp. Joh. Lissner 'Zur Etymologie von *εἶρενες*' Programm of Eger 1863. On the other hand, as Delbrück points out to me, we find in Sanskrit *mārja-s* 'man,' 'youth,' *marja-ká-s* 'mannikin.' The only difference between *μειραξ* (st. *μειρακ* for *μερj-ακ*) and *marja-ká-s* is that the former has not a vowel at the end of the stem. — The Zd. *maretan* 'man' must also belong to it. Whether these words come from the rt. *mar* 'die' (cp. *βροτό-s*) must be left an open question. — *μία* by the side of *ἴα* might point to *Fla*, it is true, but we have shown at No. 599 that *μία* admits also of another explanation. — We recognized *όδυς* (No. 290) as the Gk. form of the Skt. rt. *dvish* 'hate,' and hence we can admit of no connexion of the latter with *μῖσ-ος* 'hate' and *μισέω* (Christ 261). The OIr. *miscuis* 'hate,' *miscsech* 'exosus,' Z<sup>2</sup>. 787 and, next to these, the Lat. *miser*, *maes-tu-s*, which have retained the *m*, seem more likely to be connected with the Gk. words. (Cp. Corssen i<sup>2</sup>. 377.)

We now come to the cases in which the change under discussion has been asserted for the middle of a word, but not proved. — *ῥῆμος* and *τῆμος* have been compared with the Skt. *jāvat* and *tāvat*. I think I have shown in the 'Rhein. Mus.' 1845 p. 249 ff. that a different temporal relation is expressed in the two cases, and that the Gk. words would find their equivalent rather in the ablative form *jasmāt*, *tasmāt*. Since *jāvat* and *tāvat* have in *ῥος*, *τῆος* (No. 606) their exact Gk. equivalents both in sound and meaning, the other explanation, which appeals to the chance of the splitting up of a single form both in sound and sense into two distinct developments, loses all probability. — The attempts at explaining the *μ* in *ῥμαρ*, *ῥμέρα* to be from *F* are not at all convincing, for the suffix



-μαρ is quite clear in τέκ-μαρ (No. 235), that of ἡ-μέρα may be compared with that of ἱ-μερο-ς (No. 617). Of the various attempts to discover the root of the word the best is that of Ascoli ('Krit. Stud.' 310). He derives the word from the rt. *vas(us)* 'shine,' 'flash.' The only objection to this is that though the word occurs so often it shows no *F* in any dialect. It is true that Ascoli's keen eye detects a trace of it in the adverb σήμερον, τήμερον as he explains *l. c.* — πιμέλη 'fat' belongs no doubt to the rt. πī (No. 363), but it is much more probable that the μ belongs to the derivative element (cp. θυ-μ-έλη), than that it represents *F*. — It is doubtful whether κάμινος 'oven' belongs to the rt. καF (No. 44), since in view of the Skt. *āc-man* 'stone,' *aç-manta-m* 'oven,' the word has not unreasonably been connected with the rt. *aḥ* (Joh. Schmidt 'Root AK' p. 66); but even supposing the word to be connected with καίω, the change of *F* to μ would not be established (cp. ὑσμίνη, No. 608). — On λελειχμότες by the side of λιχμάω cp. p. 491.

We are left at last with forms in which the μ cannot be shown with any semblance of probability to have come from *F*. μασχάλη, which Pott i<sup>1</sup>. 223 and others compare with the Lat. *axilla*, has nothing to do with it. *axilla* the diminutive of *āla* (Schwabe 'De deminut.' p. 98) belongs to the Gk. *ἀκχός*-s (No. 4), which had without doubt a vowel initial. — The μ of μελίνη which confronts the Laconian form ἐλίνη given by Hesych. — if we are to trust the reading at all — is placed beyond a doubt by the synonymous Lat. *milium* 'millet,' which does not look like a borrowed word. Hehn<sup>3</sup> 495 conjectures a connexion with μέλι. — The assertion, now pretty generally abandoned, that μέχρις and ἄχρις alike both come from *Faxris* has not the smallest foundation. μέχρις seems to be connected with μετά (Pott i<sup>2</sup>. 289). For a conjecture on ἄχρις see No. 166. — The comparison of μηρό-ς 'thigh' with the synonymous Skt. *ūrū-s*, maintained by Benfey i. 81, since it would need the assumption of an intermediate form *\*vāru*, will hardly find acceptance. Bezzenberger ('Beitr.' i. 340) now connects μηρό-ς with the ChSl. *męzdra* 'membrana' (cp. *męso* 'flesh,' Goth. *mimz*) and the Lat. *membru-m*, in which case μηρό-ς would stand for μεμσ-ρο-ς. To the same group belongs the Skt. *mārman* 'joint,' 'soft part

of the body.' — Still more futile is the comparison of *μύδ-ο-ς* 'moisture' with the Lat. *vad-u-m* 'ford.' On the rt. *μυδ* see No. 479. *vād-u-m* cannot be separated from *vād-e-re* (p. 473). — *μύδ-ρο-ς* too can be explained by the same rt. *μυδ*, so that there is no need, as has been conjectured, to go to the rt. *svid*. — On *μίν*, which Christ 258 connects with the Skt. *sva*, preserved in the Gk. *φε*, *σφε*, we have above 596 (p. 543) passed a different and, I think, more probable judgement. Other conjectures may here be passed over. As it is, we have in this case ventured on a somewhat longer discussion than the plan of this book admits of in general. It seemed important, however, to investigate more minutely the extent of the change and the degree of certainty in single instances. The main result we have thereby arrived at is, that the change of *F* to *μ* is probable for only a *very few* Greek words. It is hardly more common than the interchange of *β* and *μ*—e.g. in *βαρνάμενον* = *μαρνάμενον* (Ross 'Jahn's Jahrb.' 69, 545), *βέλλειν* *μέλλειν* (Hesych.), *βύρμηξ* = *μύρμηξ* (No. 482),—which is confined to particular dialects, and is thoroughly discussed by Roscher 'Stud.' iii. 129.

### 3. γ.

The relation of *γ* to *F* has been already noticed above (p. 442). We meet with an undeniable change of *v* to *g* in the Romance languages in the case of initial *v*: Lat. *vastare*, Ital. *guastar*, Fr. *gâter*, Lat. *vulpe-s*, Ital. *golpe*, Lat. *vespa*, Fr. *guêpe*, and no one doubts that a *g* here prefixed itself to the *v* and then afterwards expelled it. Even the Teutonic languages show some instances of this change. The *g* of the Goth. *bag-m-s* *δένδρον* corresponds according to Jac. Grimm to the *u* of *bau-an*; according to Pott W. i. 1176 the word comes from the rt. *bhu*, Gk. *φν*—*bag-m-s* answering to a possible Gk. *φν-μο-ς* in the sense of *φῦμα*, *φυτόν*, *φύτευμα*. Otherwise however Delbrück 'Ztschr. f. d. Philol.' i. 11. Just so the Goth. *triggr-s* 'true' comes from the root of the verb *trau-an*, in this case with nasalization as well. Here even Schleicher (Comp.<sup>3</sup> 321) admits the origin of *g* from *v*. Other Teutonic dialects as well show *g* proceeding from *v*, e.g. the Low-Germ. *negen* (OS. *nigen*) = Goth. *nium*, MHG. *niwen*, Skt. *návan* (No. 427).



Richert 'Bidrag till läran om de konsonantiska ljudlagarna' (Upsala 1866) p. 377 adduces the Swedish *lager* = *laurus*, dialectic *Olagus* = *Olaus*. In the modern Persian languages an initial *v* changes very often to *g* (Fr. Müller in Kuhn and Schleicher's 'Beiträge' ii. p. 498 f.). On an Armenian *g* as representative of *v* cp. Hübschmann 'Ztschr.' xxiii. 16. Examples are: *gail* = Skt. *vīka-s* 'wolf,' *tagr* = Skt. *dēvar*, Gk. *δαήρ* 'brother-in-law,' cp. AS. *tācor* (No. 257). In the British languages not only does every initial *v* become *gu*, e. g. in *guin* = Lat. *vinum*, *gwr* = Lat. *vir* (*Z<sup>2</sup>*. 127), but also a *v* in the middle of a word, e. g. in *petguar* 'four,' cp. Ebel 'Ztschr.' xiii. 285. It has been denied, especially by Schleicher ('Comp.'<sup>3</sup> 235) and Corssen ('Beitr.' 70, 'Nachtr.' 82, 'Ausspr.' 597 i<sup>2</sup>, 89), that *g* arises from *v* in Latin. Five Latin verbs show in the perfect and perf. pass. participle the addition of a guttural to a shorter stem ending in *v* or *u*: *vīv-o vixi*, *conīv-e-o co-nixi*, *flu-o fluxi*, *stru-o struxi*, *fru-o-r fruc-tu-s*. It seemed most natural to explain this guttural by supposing that before the *v*,—whether original, as in *vīv-o* or developed from the *u*,—a parasitic *g* introduced itself, and subsequently passed into words and tenses derived from the stem. But at the same time some of these stems show traces of a guttural in other languages besides Latin, e. g. besides *frug-e-s*, *frug-i*, *fruc-tu-s* we get the Goth. *brukjan* [Germ. *brauchen*] 'use' (cp. note to No. 158), besides *con-flug-e-s*, *fluxi* we get the Gk. *ολύφλυξ*, *φλύκταινα* (No. 412 d), besides *co-nixi* we have the Lat. *nic-ere* 'wink' (Plaut. 'Truc.' ii. 1, 63), all of which can hardly be satisfactorily explained in this way. I therefore admit that the change of *v* to *gv* and subsequent *g* in Latin, which has again found an advocate in Joh. Schmidt 'Voc.' ii. 287, is not established. It is better to regard the guttural in some of these words as belonging to the root, in others, as in *flug* by the side of *flu*, *strug* by the side of *stru*, as a root-determinative, so that *stru-g* would bear to *stru* the same relation as *ju-g* (p. 62) to *ju*. In the case of *vixi* the view that it came from a reduplicated *gi-giv*, discussed by Corssen i<sup>2</sup>. 389 is possible, although, as Ascoli shows 'Fonol.' 131, there are difficulties to be met here too.

Doubts have been expressed as to the occurrence of this

change in Greek. The numerous glosses of Hesychius, in which an initial  $\gamma$  appears in the place of  $F$ , have been already explained by some older commentators to be blunders of copyists who wrote  $\Gamma$  by mistake for  $F$ . But Buttmann 'Lexil.' ii. 116 declares himself against this view, aptly referring to the Romance words just mentioned. Giese 'Aeol. D.' 293 recommends a middle course, assuming on the one hand that a phonetic change of  $F$  to  $\gamma$  actually took place, but admitting on the other that some of the glosses just mentioned were placed under the letter  $\Gamma$  by mistake. Ahrens again 'Dor.' 52, followed by Christ 183, will only admit the  $\Gamma$  in the glosses in question as the sign for  $F$ , and so reads  $\gamma\acute{\alpha}\delta\epsilon\sigma\theta\alpha\iota$  simply as  $F\acute{\alpha}\delta\epsilon\sigma\theta\alpha\iota$ ,  $\gamma\acute{\epsilon}\mu\mu\alpha$  as  $F\acute{\epsilon}\mu\mu\alpha$ . At the same passage all the Hesychian glosses with which we are here concerned are adduced. The reasons for and against have been well weighed in different quarters, but there are nevertheless one or two points making for the phonetic change which have been overlooked. The supporters of the view that  $\gamma$  means the sound  $F$ , rely mainly on the consideration, that otherwise there would be no trace of this important sound to be found in  
 598 Hesych., and this they cannot believe possible. But I see no weight in this argument at all. The Lexicon follows the alphabet of its time, which had long lost the sign  $F$ . The sound of the  $v$  was at that late period most naturally represented by  $\beta$ , and we have in fact under  $\beta$  a large number of glosses in which  $\beta$  was in all probability pronounced  $F$ , although we often find it impossible to distinguish those in which the real medial  $\beta$  actually arose from  $F$ . If then any letter can be regarded as the written representative of  $F$  it is not  $\gamma$ , but  $\beta$ . More weight attaches to Ahrens' remark that the words adduced under  $\gamma$  belonged in part to such dialects as, like the Lesbian, Boeotian, and Laconian, retain the  $F$  unaltered elsewhere, e. g.  $\gamma\acute{\epsilon}\mu\mu\alpha$  and  $\gamma\eta\mu\alpha$   $\iota\mu\acute{\alpha}\tau\iota\omicron\nu$ , i. e.  $F\epsilon\sigma\text{-}\mu\alpha$ . For glosses of this kind we may regard as very probable the conjecture admitted by Giese too, i. e. that they were taken from older lexicons, which were no strangers to the sign  $F$ , and were all placed together by a mistake under  $\Gamma$ , just as one or two digammated words have been placed under  $\tau$ , which resembles the digamma in form alone. It is im-



possible to decide whether the reading γουάναξ, γουελένα, γούρηξις, in the grammarian in Bekker's 'Anecd.' 1168, also proceeds from a simple confusion of F with γ. It is certain that we do find γ in the place of F even in the middle of words, e. g. in the Pamphylian Νεγόπολις = \*Νεφόπολις (Siegmund 'Stud.' ix. 91) in an inscription, though in the words given by the grammarians there *may* be nothing but the writing of one letter for another, but here the mistake must be supposed to have been made afresh each time that γ was so written. There is no doubt that γ stands for F in the middle of the glosses ἀγατᾶσθαι βλάπτεισθαι, ἀγάτῃμαι βέβλαμμαι, as Ahrens p. 55 admits in a measure. The forms belong so clearly to αὔατα = ἄτη in Pindar that there is no reason for the alteration, proposed by M. Schmidt following Lobeck 'El.' i. 162, into ἀτάτῃμαι. In Aesch. 'Ag.' 730 again Meineke is perhaps right in reading ἀάταισιν. If e reflect then that, if the sound *v* occurred in the word explained by the lexicographer, it would be expressed much more simply by β, or, after a vowel, by υ, it is far more probable in this case, that there was a phonetic change of F to γ.—The tradition also preserved in Hesych. and given in the 'E. M.' 167 on the authority of Herodian, that ἀτρύγετος<sup>1</sup> like ἄτρυτος (cp.

<sup>1</sup> Joh. Schmidt 'Voc.' ii. 337 takes ἀ-τρύγ-ε-το-ς as 'not to be dried up,' connecting τρυγ with τρυγεί (or τρύγει) ξηραίνει, ἔτρυγεν (Meineke ἐτρύγη) ἐξηράνθη, ἐπὶ λίμνης Hesych. But these glosses furnish but very little proof of a verb \*τρύγειν 'dry.' The only passage thought to contain the word, Nicand. 'Ther.' 368 ἀλλ' ὅταν ὕδωρ σείριος αὐήνησι, τρύγη δ' ἐνὶ πυθμένι λίμνης contains an insufferable tautology if with the older Schneider (Lobeck 'Rhem.' 51) we read τρύγη δ' ἐνὶ πυθμένι λίμνη, while it gives a good sense if with the scholiast we take τρύγη to be a substantive denoting the 'dry bed' of the lake. The doubtful rt. τρυγ has now been provided with two cognates outside Greek: Fick i<sup>2</sup>. 598 connects it with the Lat. *tergere*, the meaning of which does not at all suit a drying lake, and with the ON. *thurk-r* 'drought.' Joh. Schmidt refers the γ of τρυγ to an older χ (cp. above p. 526) and can so connect the hypothetical rt. τρυχ with the AS. *dryge*, Low Germ. *drög*. This is, on the face of it, a very complicated assumption. And as to the meaning, while for the sea we can allow the meaning 'not to be dried up,' it can hardly suit the aether, though Joh. Schmidt reminds us of the dew it produces. This interpretation

99 'Ατρυτώνη) meant ἀκαταπόνητος 'not to be rubbed away,' 'untireable' (cp. Clemm 'Stud.' viii. 87) gains credit perhaps from the fact that the derivation from τρυγᾶν 'reap' leaves the ε entirely unexplained. We should then have in this word a very old instance of the phonetic change of *F* to *γ*. If so, the *F* must have developed itself at a still earlier time from the preceding *v*, and ἀ-τρύ-ε-το-ς would be a companion to ἀ-τί-ε-το-ς; 'not to be rubbed,' i.e. 'worn away' would be undoubtedly a suitable epithet of the sea with its untiring motion (Lobeck 'Prolegg.' 145), as also of the aether, the everlasting, in spite of all its storms (*P* 425). Perhaps the *γ* owes its survival to the fact that the Rhapsodes early adopted the derivation from τρυγᾶν. — The same applies to μάλυγερ' τὰ ἄνοξα ξύλα, a gloss whose final *p* shows it to be Laconian. The form is for \*μωλυφες, identical with the Lat. *molles*, i.e. *molv-es* (No. 457). Used metaphorically we find μωλύτερον' ἀμβλύτερον, μῶλυ-ς' ὁ ἀμαθής, μωλύεται' γηράσκει. We have met with similar phonetic developments of *F* from a preceding *v* already (p. 586) in ὀρούβω, ἀριστεύοντα, etc. (Cp. Savelsberg 'Dig.' 28.) — Baunack's conjecture ('Stud.' x. 60) is at all events an ingenious one—that in Hesychius's gloss ἀγωγίς [better ἄγωγίς] ἄγωμεν' Ἀργεῖοι there is contained a first pers. dual identical with the Skt. *agā-vas*. It is possible that the same is the case with the Hesychian gloss ὀφρυγή and ὀφρυγνῆ, the former of which is explained by χρώμα (perhaps a mistake for ὀφρύωμα), λόφος, αἵμασιά, and the latter by ὀφρυάζει. ὀφρύη is a form of actual occurrence, and in the Aeolic poem of Theocr. 30, 7 the reading δι' ὀφρύγων has sufficient MS. authority. — A Latin *v* is rendered by *γ* in the glosses γέντερ' ἡ κοιλία and 600 σεργοί' ἐλαφοί, i.e. *cervi*. The glosses are important as witnesses to the assibilating pronunciation of the Lat. *e*, and thereby indirectly to the time at which such glosses were collected. It is certainly possible to conjecture that *γ* is here only the written, not the phonetic representative of the labial spirant.

brings the dew-producing power of the aether too much into the foreground. — It is enough to condemn Fritz Schöll's interpretation 'born of the darkness' ('Acta soc. phil.' Lips. iv. 325) that the assumption that there is a rt. τρυ 'to be dark' has nothing but the Lat. *trux* to support it.



## 4. Further changes.

As a labial the digamma has a certain relationship to  $\phi$ . But it must appear *a priori* improbable that the aspirate, which consists of an explosive with a breathing following it, should without any external inducement develop itself from the far weaker labial spirant. The only instances of this change, that can be pointed out, are to be found in two classes of words; first, in certain words in out-of-the-way dialects, in which the lack of a customary sign for the actually existing sound  $\nu$  led to the adoption of the  $\phi$  which in its later pronunciation as a spirant was somewhat similar; and next after a preceding  $\sigma$ , which, as a hard sibilant, assimilated the spirant to itself, that is, hardened it into the aspirate. On an inscription from Aspendos we read ἀγύρυν μνᾶς φίκατι for *φίκατι* (Gust. Hirschfeld 'Berl. Monatsb.' 1875 p. 123). *φέσπερε, πάντα φέρεις* is now rightly read in Sappho 95 (Bergk<sup>3</sup>), since only 'Et. Gud.' gives *φέσπερε*, the other sources *ἔσπερε*. — λαῖφα· ἀσπίς (Hesych.) is proved, as Ahrens 'Dor.' 49 shows, by the glosses λαῖβα· πέλτη, λαῖτα (with a copyist's error of T for F)· πέλτη, λαῖας· ἀσπίδας Κρηῆτες, to be identical with λαῖφα (No. 533). λαφός· ὁ ἀριστερᾷ χειρὶ χρώμενος is however probably nothing but the Latin *laevus*. — Savelsberg 'Ztschr.' viii. 407 conjectures that σνφεός-s (κ 389 σνφειοῦ) 'pig-sty' was developed from σν-F-εός-s. Fick i<sup>3</sup>. 699 takes the word as 'pigs' building,' identifying -φεο-s with the Lat. *favus*. — It is a mistake to take φέννος φόνος, ἐνιαυτός, which has been compared in the latter meaning with γέννος ἀρχαῖος, as an instance of  $\phi = F$ . The genuineness of both words is rendered doubtful by their position, and the latter in particular is among surroundings that thoroughly justify M. Schmidt's asterisk. As we have shown at No. 428 that in ἔνο-s 'old' the original initial was the sibilant, there is no establishing the digamma at all. — We must reject the comparison, first attempted by Savelsberg viii. 407, of φιερός = φιαρός 'bright,' 'shining,' with ἱερός, as the latter had originally a vowel initial (No. 614). — There are however three clear instances in which the F hardened itself unmistakably under the influence of  $\sigma$ ; first the pro-

601 noun-stem σφε, the by-form of *Fε*, *ε* = Skt. *sva* (No. 601), on which it is enough to refer to p. 443. That, as Ebel 'Ztschr.' xiii. 286 assumes, the phonetic process consisted in the first place in the introduction of a *π* before the *F*, and that the latter fell out in time, I think has not been made out. — We assumed the occurrence of the same change at No. 575 for σφόγγο-s. — The stem of the personal pronoun of the second person in the dual σφω is developed in a similar way from the singular *tva* (1 s. Skt. *tva-m*). Here the first step was the changing of the *t* to *σ* under the influence of the *v* (cp. *τεσσαρ* = Skt. *kā-tvar*), the next the change of *v* to *φ* under the influence of the *σ*. The Graeco-Italic *o* (σφο and *vō-s*, *vō-bi-s*) is remarkable, as it also establishes the agreement with the Skt. *va-s*, etc. (Bopp 'Vgl. Gr.' ii<sup>2</sup>. 127). — In Irish an original initial *v* is regularly represented by *f*, e.g. in *fer* 'man,' Lat. *vir*, *fiche* 'twenty,' Lat. *viginti*. The pronoun-stem *sva* seems to be present in the OIr. *feib* 'as,' probably a reduplicated formation like the Goth. *svasve*, and further in the remarkable for forms 'self' *fesin*, *fēin*, *fadesin* Z<sup>2</sup>. 366.

Of the change, still more improbable in itself, of *F* to *π* probably the only instances of any validity are σπόγγο-s (No. 575), in which *π* varies with *φ*, and λισ-πο-s for λιτ-φο-s (No. 544), where it is explained to be due to the influence of the sibilant. The Doric form Πάξος, as the MSS. in Skylax p. 19 have it (Voss and others 'Οαξός) by the side of 'Οαξος, *Fάξος*, is very problematical, inasmuch as the reading is by no means certain. — Even if the Cretan ΠΟΛΧΟΣ really meant 'people' as was assumed, it would not be identical with *δχλος* or *volgus*. But Roscher shows at 'Studien' ii. 1, 154, that there is not the smallest warrant for the assumed meaning, and that it is more likely that the word, which is found on a few coins from Cnossus, is a proper name—probably nothing but the syncopated by-form of Πόλιχος. — ἀμπέσαι Lacon. = ἀμφιέσαι, which Ahr. 'Dor.' 357 explains to be ἀμ-φέσαι, clearly owes its *π* to the operation of the *φ* in ἀμφί, although it is not easy to see how the following *F* could arrest the process of aspiration. The case of ἀμπ-έχ-ω is not analogous.

The assertion that *F* can become *κ* or *χ* is made good neither by Christ (184) nor by Savelsberg (35). ἐήδο-κα



formed on the analogy of  $\epsilon\mu\eta\mu\epsilon-\kappa\alpha$  with the perfect termination  $-\kappa\alpha$  is no proof at all of it. On the entirely isolated  $\epsilon\delta\eta\delta\omicron\omicron\alpha$  see above p. 505.

The change of  $f$  to  $\rho$  after a consonant; of which there is little evidence, has been treated of at p. 455.

Savelsberg, it is true, is for assuming the change of  $f$  to the dental  $\sigma$ , a sound as foreign to it as possible, but it is hardly likely that he will find any one to agree with him.

## 2. Transformations of the J.

602

### I. TRACES OF THE EXISTENCE OF THE $j$ IN GREEK.

'The palatal spirant  $j$  is to be found in its proper form in no Greek dialect, for the simple reason that the Greek alphabet never had a special sign for it. The loss of this consonant is one of the chief peculiarities of the Greek language, shared by all its dialects, as far as any written records that we have can tell us.' Hitherto we have been driven to the conclusion above given. The welcome addition which our knowledge of Greek has received by the discovery of the Cyprian syllabary revealed, among other things, characters which have been interpreted with probability as  $ja, je$  (Deecke-Siegismund 'Stud.' vii. 222 ff., Hartel 'Homer. Stud.' iii. 39, Joh. Voigt 'De titulis Cypriis,' 'Leipziger Studien' i. 253 ff.), e. g. in the words  $\acute{\iota}\tilde{\alpha}\sigma\theta\alpha\iota$ ,  $\acute{\alpha}\delta\rho\acute{\iota}\tilde{\alpha}\tau\alpha\nu$  (=  $\acute{\alpha}\nu\delta\rho\acute{\iota}\alpha\nu\tau\alpha$ ),  $\acute{\iota}\epsilon\rho\acute{\epsilon}\omicron\varsigma$ . It is remarkable that these sound-groups never began a word, and occur in the middle only of words in which a  $j$  has been developed on Greek soil from a preceding  $\iota$ , just in the same way as in the Cyprian dialect, a  $v$  often produces the corresponding  $\upsilon$  ( $\kappa\alpha\tau\epsilon\sigma\kappa\epsilon\upsilon\tilde{\iota}\alpha\sigma\epsilon$ ). In its disinclination to the palatal spirant Greek resembles Old-Irish, which suffered the same loss, and the Norse languages, in which an initial  $j$  is very generally dropped (Grimm 'Gr.' i. 322), e. g. OIr.  $\acute{o}\alpha\epsilon$  (OCymr. *ieuanc*), ON. *ung-r* = Lat. *juvencu-s*, Germ. *jung*. But the surviving effects of this letter in Greek may be traced to an almost greater extent than those of the digamma. They are more various, though they are in part more difficult to explain.

There is a mass of evidence in the Homeric poems of

the survival of an initial *F*. The question is, do these oldest of Greek monuments furnish any similar metrical indications of the *j*? In the 'Philologus' iii. 6 ff. I have discussed this question with reference to two words of frequent occurrence. The facts of the case no one doubts. The case is the simplest with the *ōs* which follows its word, and for it I may refer to I. Bekker 'Homer. Bl.' i. 204 and to Knös 'De digammo' 166. According to the reckoning made by the latter, forty-four Homeric verses (after deducting twenty-three repetitions) point to a consonantal initial (κακὸς *ōs* Z 443, κύνες *ōs*, θεὸν *ōs* — μελίη *ōs*, λύκοι *ōs* Δ 471), twenty-three are against it (after deducting seventeen repetitions, e. g. θεὸς δ' *ōs* τίετο δῆμῳ E 78), the rest give no indication either way (e. g. κύων *ōs* O 579). This state of the case led I. Bekker to assume that 603 *ōs* was related to the pronoun of the third person, and a further result of his conclusions was the writing *Fōs* where the verse allowed it. But there are special difficulties in this course. In no other position does *ōs* show the faintest trace of a consonantal initial — e. g. not in σαώτερος *ōs* κε νέηαι A 32, Θέτις δ' *ōs* ἤψατο γούνων A 512, ἀλλ' ἄγεθ' *ōs* ἂν ἐγὼν εἶπω B 139. There remain therefore but two courses open to us. Either we must hold that this distinction in the case of the postposed *ōs* is one of the many accidents which must be admitted to have happened in the preservation of the *F* in Homer, or else we must show special grounds for it. The number of instances is such as quite to preclude the supposition of chance. Besides *ōs* 'as' is unmistakably the adverb, i. e. it is originally the ablative of the rel. pronoun *ǵ-s* = Skt. *ja-s* (No. 606) and so far corresponds to the Vedic particle *jāt*. The use of this somewhat rarely occurring particle agrees in some points exactly with the customary uses of *ōs*, e. g. *jāk-khrēshṭhā*, i. e. *jāt-grēshṭha* 'as well as possible' *ōs* βέλτιστα ('Pet. Dict.'). Consequently there is nothing to establish the *F* for *ōs*. Notwithstanding Leo Meyer has recently ('Ztschr.' xxi. 351 ff.) vigorously attacked my assumption that we here have to do with an effect of the *j*. His own view is that 'the postposed *ōs* does not belong to the relative pronoun at all, but to the stem of the reflexive pronoun σφε, *φε*.' In that case we should have to assume that there were two



different *ὥς* — that in phrases like *τῶν πάντων οὐ τόσσον ὀδύρομαι ὥς ἐνός* *X* 425, *μαίνεται δ' ὥς δτ' Ἄρης* *O* 605 the comparative *ὥς* was of relative origin, but not in *ὄρνιθες ὥς, φυτὸν ὥς*; that the former came from *jāt*, the latter from *svāt*, and that it was a simple chance that *ὥς τε* in its comparative use, e.g. in *ὥστ' ἀμητῆρες* *A* 67, *ὥστε κρήνη μελάνυδρος* *Π* 3 had exactly the same force as the postposed *ὥς*. It will be admitted that this makes great demands on our faith. On the other hand I see nothing prodigious in the assumption that in certain formal phrases in which the *ὥς* was, contrary to its later use, put after its word, the power of the initial of *ὥς* to remove a hiatus and make 'position' survived, owing to the unbroken tradition of the Homeric poets, from the time when a fully sounded *j* still existed at the beginning of the word. We have seen at p. 562 similar instances of the surviving effects of lost sounds in the Romance languages. Indeed this assumption seems to me to supply a sufficient explanation of the two-fold treatment of the initial of this word in Homer. But it is no use expostulating further with anyone who can believe that there were two distinct words *ὥς* meaning 'as,' and that it happened that the one supposed to have had an initial *F* has only survived as a postposed particle. Did anything ever so happen elsewhere?

The case of *ἔσθαι* is harder to settle. In two points there 604 is a remarkable phonetic distinction in Homer between the active *λέναι* and the middle *ἔσθαι*. The *ι* in the active is almost always short, very rarely long (*πρόσθεν ἔεν* *M* 33 — *ὥς φάσαν ἑλῖσαι ὅπα μ* 192), on the other hand in the middle it is long fifty-nine times and hardly ever short. Before the active forms there is, with the exception of *ἦκε* (e.g. *ἄστερα ἦκε* *Δ* 75) in a few verses, no clear trace of a striking hiatus. It is only from *ἔηκε εἶσαν* ('Greek Verb' pp. 80 and 85) that we can deduce the existence of the consonantal initial for an earlier period. The middle however shows a hiatus in twenty-nine cases before the forms beginning with *ι* (*ὃ δὲ ἔετο* *A* 537, *οἵκαδε ἑμένων* *B* 150), and only four passages do not admit of a consonantal initial (*ἄμφω δ' ἑέσθην* *Σ* 501). Moreover in the active the physical meaning 'send,' 'throw' is the prevailing one, in the middle the metaphysical meaning

'strive,' 'desire.' In spite of these differences it is only recently that any doubt has been expressed as to the connexion of the active and the middle. That they were the same verb is made probable in the first place by the complete similarity of their inflexion, and this argument is made still stronger by the comparatively small number of the verbs in *μι*. *Moreover even in Attic Greek the quantity of the ι is variable.* Here the vowel is *long* as a rule in the active as well and a *ι* is an exception (Nauck 'Philol.' xi. 464, Veitch 'Greek Verbs' p. 293). Finally the Homeric meaning 'desire' for *ἴεσθαι* is very common in the Attic poets (Ellendt 'Lex. Soph.' s. v.) and *ἐφίεσθαι* which is common in Attic prose and poetry has exactly the same meanings as the simple verb. Are we to suppose that *ἐφίεσθαι*, e. g. in phrases like *ἀλόχου* (Eur. 'Hel.' 1183), *ἀρχῆς* (Thuc. i. 128), *τυχεῖν* (Soph. 'Phil.' 1315) *ἐφίεσθαι*, has nothing at all to do with that poetical *ἴεσθαι* and was developed, in exactly the same meaning, by a pure chance, from *ἴημι*? This is what Leo Meyer is driven to assume, for he repeatedly (last in Bezzenb. 'Beitr.' i. 301) and emphatically maintains that the active and the middle come from different roots. The Attic *ἐφίεσθαι* 'desire' shows by its related noun-forms *ἔφεις*, *ἐφетικός* (*ρήματα ἐφетικά* 'verba desiderativa') that it can belong to no other root than *ἐ*. It will be seen from all this that it is worth while to attempt to explain the discrepancies between the active and the middle without severing the connexion between them. This attempt I made at 'Philol.' iii. 5 ff. Without being prepared to make good every particular assertion in a paper written thirty-three years ago, I still think that in its main idea it was right. To begin with the meaning: there is no lack of instances of the passing into each other of the meanings

605 'send' and 'strive.' Passing by phrases like our 'to throw oneself into a thing' we find even in the active e. g. of *ἐφιέναι* in Homer many instances of the meaning 'to urge on' (*ὅτε μ' ἐχθοδοπῆσαι ἐφήσεις* A 518, *οἶνος ὅστ' ἐφέηκε πολύφρονά περ μάλ' ἀείσαι* ξ 464). It is not a long step from this use of the active to *ἴεσθαι*, *ἐφίεσθαι* 'to have oneself driven,' 'strive.' Even the simple *ίέναι* shows traces of an intransitive use, e. g. *ἴησι* 'flows' η 130, λ 239 and in the sense of 'dashes,'



'fertur' Aesch. 'Pers.' 470 ἦσ' ἀκόσμφ ξὺν φυγῇ. I believe that ἦμι is a reduplicated present of the rt.  $\acute{e}$ =Skt.  $j\bar{a}$  'go,' 'draw,' and that consequently its original form was  $*ji-j\bar{a}-mi$ . That, as Leo Meyer puts it, this present is 'all in the air' is true to this extent that there is no Indian  $*ji-j\bar{a}-mi$ , but Leo Meyer's  $*si-s\bar{a}-mi$  has no support in Sanskrit either, and only a very doubtful one in the Lat. *se-ro* for *se-so*. At all events  $v\bar{i}ja$  (from the stem  $v\bar{i}$  'desire') assumed to account for Leo Meyer's  $*\phi i\epsilon\mu\alpha i$  is a pure invention. It is well known that different languages use different methods of present formation for the same root. Are we to suppose that  $\tau\acute{\upsilon}\pi\tau\omega$  has nothing to do with the Skt.  $tup\bar{a}-mi$  (No. 249)? Another objection made to my view is that it does not admit of any explanation of the length of the  $\iota$ . In 'Ztschr.' xxi. 353 the Dorpat Professor asks 'where are we to find another  $\iota$  in a reduplication lengthened?' The answer is, 'to begin with, often in the active ἦμι, which Leo Meyer himself holds to be reduplicated, not only by wicked Attic writers to whom this Homerist is reluctant to go, but also, as we have seen, here and there in Homer, and next in  $\pi i\phi\acute{\alpha}\upsilon\sigma\kappa\omega\nu$  ( $\delta\acute{\eta}\mu\omega\ \pi i\phi\acute{\alpha}\upsilon\sigma\kappa\omega\nu$  Σ 500, by the side of  $\acute{\eta}\acute{\epsilon}\ \tau i\ \mu\upsilon\rho\mu i\delta\acute{o}\nu\epsilon\sigma\sigma i\ \pi i\phi\acute{\alpha}\upsilon\sigma\kappa\epsilon\alpha i$  Π 12), in  $\Sigma\acute{\iota}\sigma\upsilon\phi\omicron\varsigma$  (Z 154),  $\tau\acute{\iota}\tau\acute{\alpha}\nu$ ,  $\tau\acute{\iota}\tau\upsilon\rho\omicron\varsigma$ , and also in Indian aorists like  $a-p\bar{i}-pata-t$ ,  $a-g\bar{i}-gar$  (Delbrück, 'Verb.' 109 f.).' The frequent occurrence of hiatus before  $\acute{\iota}\epsilon\mu\epsilon\nu\omicron\varsigma$  etc. I explain to be surviving effects of the departed  $j$ , as in the case of the postposed  $\acute{\omega}\varsigma$ . It is not surprising that this old fashion should have survived only in the middle forms meaning 'desire' which had most nearly become a special phrase and were confined to poetry, while in the case of the active forms, which occurred commonly in all periods, it gave way, even in Homer, before the ordinary pronunciation. In the active there established itself — though, as we saw, by no means universally — the causative meaning (Skt.  $j\bar{a}-p\acute{a}-j\bar{a}-mi$ ) 'send,' 'drive,' in the middle however the metaphysical one of 'desire.' In Sanskrit the latter appears in  $j\bar{at}$ , which exactly means 'strive,' and is as undoubtedly an expansion of  $j\bar{a}$ , as  $i\bar{s}h$  'wish' is of  $i$  'go.' The varying intransitive, transitive and causative uses which in verbs like  $\acute{\iota}\sigma\tau\eta\mu i$ ,  $\beta\acute{\alpha}\lambda\iota\nu\omega$ ,  $\phi\acute{\alpha}\lambda\iota\nu\omega$  and others distinguish the

different tenses are not restricted within the same limits in the case of other verbs, such as *ἀγειν*, *ἐλαύνειν*, *βάλλειν* and the Lat. *volvere*. The rt. *pat* 'fly' (No. 214), though showing even in Latin (e.g. *impetus*) decided traces of an intransitive use, has here fixed itself as specially transitive. It would be well worth while to trace more minutely such processes in the history of the meanings of words. After all I believe that my view of *ἦμι*, though not 'proved' — how much there is in the realm of our study which does not admit of proof! — may yet be reckoned probable, — more probable than any which has sought to replace it. For the attempt, made by Fick i<sup>3</sup>. 789, to connect the whole verb with a supposed rt. *sa* leaves the Homeric phenomena from which we started altogether unexplained.

The traces of a semi-vowel *j*, which under the influence of a following vowel has introduced itself sporadically in the place of an *ι*, have been very carefully collected by Hartel 'Homer. Stud.' iii. 15 ff. Where diphthongs are made short before vowels (*ἔμπαιος*, *οῖος*, *ἵππειον*) the question how long the *ι* survived as a semi-vowel is not always easy to answer, and here I cannot always think Hartel right (as indeed he himself admits at p. 19) in holding that often only a 'quite slight vibration' survived of the semi-vowel. Certainly we must assume more than this in the disyllabic *ἀργίας* Aesch. 'Ag.' 112, in *λόγιοι* with the first syllable short in Pindar 'Nem.' 6, 30 and in similar cases.

The transformations of the *j* are very similar to those of the digamma. Much matter that comes under this head has been discussed by Grassmann in his important essay 'On the connexion of the consonants with a following *j*, and the phenomena which arise therefrom' ('Ztschr.' xi.). Here, as before, we start with the vowels.

## II. INTERCHANGE BETWEEN J AND VOWELS.

### 1. Interchange between *j* and *i*.

The vowel *ι* comes a step nearer still to the consonant *j* than *υ* does to *f*, inasmuch as not *ü* but *u* was the vowel with which *f* changed places. Hence the remarks made



before about the relation of the semi-vowel and the corresponding vowel apply here more aptly still. In many cases it is impossible to decide which is the older of the two sounds. There are probably only two instances in which an initial *l* corresponds to a *j* in related languages, i.e. the proper name 'Ἰάορες by the side of the Skt. *Javaná-s* 'Greeks,' OPers. *Yauna*, in which case the Greek vowel naturally has <sup>607</sup> priority over the oriental semi-vowel, and the verb *lévai* = Skt. *jā* 'go,' for separating which Brugman 'Morphol. Forsch.' i. 5 does not seem to me to have shown any good grounds. In the middle of a word however the correspondence of the one to the other is very frequent. The instances of this in the structure of the verb have been collected, together with the analogous cases in other departments, in my 'Greek Verb,' e.g. (p. 208) *ιδ-λω* = Skt. *svíd-jā-mi* (No. 283), Dor. fut. *πραξι-ω*, *βοαθησιω* (p. 468), *ε-λη-ν* for *εσ-ιη-ν* = Skt. (*a*)*s-jā-m*, Lat. (*e*)*s-ie-m* (p. 329). In the declension of nouns we meet with this phenomenon in the gen. sing. of the *o*-declension: *ο-ιο* = Skt. *a-sja* (Bopp 'Vgl. Gr.' i<sup>2</sup>. 384); numerous suffixes used in the formation of words show it, as does the comparative suffix *-ιον*, Lat. *-ior* = Skt. *ījan-s* for *jans* or *ians*, e.g. *ήδ-λων* = Skt. *svād-ījān*, Lat. *suā(d)v-ior*, and the common suffixes *-ιο-s*, *-ια*, *-ιο-ν*, on the relation of which to the Skt. *ja-s*, *jā*, *ja-m* the reader is referred to Bopp's 'Vgl. Gr.' iii<sup>2</sup>. 333 ff. It should be noticed that in almost every case the Latin vowel agrees with the Greek, more especially in the formation of substantives and adjectives, for which the suffixes *ιο-s* = *iu-s*, *ια* = *ia*, *ιο-ν* = *iu-m* are employed in a remarkably similar manner by the two languages, while the Teutonic and Slavonic languages constantly resemble the Sanskrit in choosing the consonant *j*. We may conjecture from this that the vowel was of great antiquity. Benfey has likewise decided for the priority of the vowel for *ia* and elsewhere in his dissertation 'Ist in der indogerm. Grundsprache ein nominales Suffix *ia* oder statt dessen *ya* anzusetzen?' (Gött. 1871), and Havet ('Mém.' ii. 177) agrees with him most decidedly. We have already had occasion (p. 562 f.) to speak of the survival of the *i* in the dialect of the Vedas where a *j* is found later. The course of language was certainly in this

ful. — For a further set of forms there are to be found elsewhere dialectic by-forms, which clearly point to *j*, so in particular with *Βορέης* which at / 5, Ψ 195 makes a spondee, and had consequently an *ε* pronounced like a consonant and of the nature of a *j*, which was able to make the *ο* long by position. The form *Βορῶς* in which the accent is irregular arose by assimilation, like the Aeol. *φθέρρω* from *φθερ-ῖω*. A conjecture on its origin has been given at No. 504. There is however this difference between these two cases, that the *j* of *φθέρρω* is original while in the conjectural *Βορῶς* it arose on Greek soil from *ε*. For Zacher 'De nom. in *αιος*' p. 127 is no doubt right in explaining *Βορέας* to be from \**Βορεσ-α-ς* (*φόρος* 'mountain') and *Βόρειος* from *Βορεσ-ιος*. — The case is the same with *στερέος* for which the Attics preferred the form *στερρός*, i. e. *στερ-ῖος*, while the fem. *στεῖρα* (No. 222) has transposed the *ι* to the stem-syllable (cp. *φθείρω*), and with *κεν-εός* by the side of the Aeol. *κέννος* and the Epic *κεινός*, which was later shortened into *κενός* and is exactly parallel to the Aeol. *στέννος*, Epic *στεινός*, Attic *στενός*, while it should be compared with the Skt. *çūn-já-s* (No. 49) as well. On the Thessalian inscription edited by Heuzey ('Annuaire de l'Association pour l'encouragement des études Grecques' Paris 1869), l. 3 we read *πατρούεαν* = *πατρώϊαν*. The Chian inscription in Cauer's 'Delectus' No. 133 has the forms *οίκέας* and *οίκίās* side by side. As Old Attic we find *Λυσέας* by the side of *Λυσίας* ('C. I. A.' i. 468).

In other cases it is more probable that the *ε* is a shortening of the diphthong *ει*. Among these comes *δωρεά* with the Hesychian by-form *δωριά*. This word *δωρεά* may undoubtedly be placed, if only in virtue of its accent, among the collectives in *-já*, treated by Bopp 'Vergl. Gr.' iii<sup>2</sup>, 339, e. g. Skt. *gav-já* 'a herd of cows,' cp. *άνθρακ-ιά*, *μυρμηκ-ιά*, *νεοττ-ιά*. Accordingly  
 610 *δωρ-εά* properly means 'a number of gifts,' and the original form was *δωρε-ιά* in which the *ε* is of the same kind as that of *ἵππε-ιος*, *ταύρε-ιος*. This form was first pointed out by Hugo Weber ('Ztschr. f. Gymnasialwesen' 1863 p. 123) in an inscription. Since then so many instances of *δωρεά* have been discovered that doubt is now felt on the other hand, as to whether *δωρεά* is good Attic. Cp. A. Schaefer 'Rhein.



Mus.' xxiii. 422, where a remark of Bücheler's is quoted to the effect that in the tragedians the metre never requires the shorter form. Cp. Zacher 'Nomina in αἰος' p. 52. To the same class of words belongs γεν-εά, the original meaning of which we must take to be 'generation,' i. e. the sum of people of the same age. Since these collectives presuppose an already existing noun-stem from which they are derived, we must refer γεν-εά to \*γενεσ-ja, which first no doubt became \*γενεία, then γενεά, as \*τελεσ-jo-s became τέλειο-s and τέλεο-s, and as the verbs in -εω came from -εj-ω (Hom. νεικείω). Here accordingly ε is etymologically not a representative of the j but of a combination of sounds containing a j or ι. The same is true of the adjectives of material in -εο-s, Epic -ειο-s Dor. -ιο-s, Skt. *ṛja-s*<sup>1</sup>. The names of trees too ending in -εα (κρανέα, συκέα) with by-forms in -ια, e. g. κρίνεια, treated of by Ahrens 'Dor.' 121 and Lobeck 'El.' i. 251, seem to me most naturally classed with the adjectives in -εο-s, so that here the tree is named from its fruit, the fig-tree being called 'the figgy (tree).' The vacillation between ει and ε lasted in many words to the latest period of Attic and even longer. Demosthenes' ἐπηρεάζειν by the side of ἐπήρεια is a striking instance of it. — The most thorough substitution of ε for ει is to be seen in the particle εἰάν, which even in Homer was contracted to ἦν, while later ἄν, ᾗν was formed from the uncontracted εἰάν. The Epirot inscriptions of Karapanos now show us εἰάν (*V<sup>hmo</sup>* Série No. 18), but no one will take that for the primary form. Here as often in Epirot ει and ε are interchanged (ἔμειν, Διοπέθης).

In the forms just discussed we had the guidance of Greek dialects, but there are others of which the explanation must be sought in the related languages alone. Among these is ἐτέό-s compared at No. 208 with the Skt. *satjā-s*. The derived ἐτάζειν preserves the shorter stem ἐτο, which is parallel to κeno and στενο. The unstable nature of this ε is clearly to be seen in the Homeric φρένας ἡλέ (O 128) by the side of φρένας ἡλεέ (β 243). Cp. A. Fritsch 'De hyphaeresi' ('Stud.' vi. 108). — We may perhaps conclude from the ONorse form *vidja* 'hoop,' that the ε of the corresponding *ῥιτέα* (No. 593) 611

<sup>1</sup> On the by-form -ηο-s, cp. 'Stud.' ii. p. 187.

form cannot part off into two different later forms, really so certain, as to make impossible an explanation which recommends itself to us, as we see, from so many sides? I may refer  
 631 on this point to my discussions of sporadic change of sounds on p. 426 ff. We have learnt to recognize roots like  $\mu\epsilon\rho\gamma$  (No. 150) and  $\mu\epsilon\lambda\gamma$  (No. 151),  $\acute{\alpha}\rho\kappa$  and  $\acute{\alpha}\lambda\kappa$  (No. 7) the duality of which is based upon the parting of the  $r$  into  $r$  and  $l$ . The Skt. suffix  $\bar{e}ja$  occurs in Greek in three phases (cp. 'Stud.' ii. 187),  $\eta io$ , e. g. Herod.  $\acute{\alpha}\nu\theta\rho\omega\pi\eta io-s$ ,  $\epsilon io$ , e. g. Homer.  $\chi\rho\acute{\upsilon}\sigma\epsilon io-s$ ,  $\epsilon os$  also retained as early as Homer in  $\chi\rho\acute{\upsilon}\sigma\epsilon o-s$ , to say nothing of the 'splitting' of the  $a$  into  $\alpha$ ,  $\epsilon$ ,  $o$ , because we have now before us on this point such diverse attempts which yet can hardly altogether deny the fact. The transformation of the  $f$  took a still more varied form. A varied treatment of those sounds in particular, which even in early times in the independent life of a nation were ill-suited to its organs, seems to me to be easily comprehensible psychologically. I agree on this point with a remark of Joh. Schmidt's, who expresses himself in 'Ztschr.' xxiii. 293 in the following way: 'at the time when in most of the cases where  $j$  stood alone it had been lightened into a rough or a smooth breathing, in those which were left it became hardly pronounceable, and required a special exertion of the organs of speech. The consequence was that in order to articulate  $j$  the corresponding sonant closed sound was used at the beginning, etc.' I do not attempt to decide whether really a palatal  $g$  formed originally the strengthening of the  $j$ , as Joh. Schmidt thinks, and then this afterwards passed into a  $\delta$ , or whether the latter came in at once. But what is there to surprise us if, in spite of this attempt to succeed in pronouncing a sound which was not yet entirely lost to the linguistic sense, in other cases this entirely disappeared? Both phases of the language then extended themselves further, and are preserved to us side by side like so much that has originated successively.

(6) What we put forward here hypothetically, is universally recognized for the beginning of a word. There is a  $\zeta$  as the representative of a  $j$ . Is there now any adequate reason to deny this process persistently for the middle of a



it has been shown to be quite improbable that the  $\epsilon$  arose from a  $j$ . Wackernagel tries to defend the old comparison of  $-\epsilon v$  with the Skt.  $j u$ , holding that a  $j$  has fallen out between  $\epsilon$  and  $v$ .

### 3. $j$ as $v$ .

The attempt to find  $v$  as a representative of a  $j$  has not<sup>612</sup> been very successful. My former comparison of  $\kappa\acute{\upsilon}\alpha\nu\omicron-s$  with the Skt.  $\text{çjā-mā-s}$  I have abandoned on p. 546. There remains therefore but a single instance. Plato 'Crat.' p. 418<sup>d</sup>, in the course of his derivation of the Gk.  $\zeta\nu\gamma\acute{o}-\nu$  from  $\delta\acute{\upsilon}\omicron$ , assumes an older form  $\delta\nu\omicron-\gamma\acute{o}-\nu$ , which perhaps was not merely made up at random, but rather a somewhat arbitrary way of writing  $djugón$ , i.e. the same form which we have to assume as a connecting link between the Graeco-Italic  $jugo-m$  (Skt.  $jugá-m$ ) and the Gk.  $\zeta\nu\gamma\acute{o}-\nu$  (No. 144).

## III. CHANGE OF $j$ INTO OTHER CONSONANTS.

### A. $j$ as $\gamma$ .

In the mouth of a modern Greek  $\gamma$  has in many cases (cp. Deffner 'Stud.' iv. 241) the pronunciation of a spirant. Here belongs especially  $\mu\nu\hat{\iota}\gamma\alpha = \mu\nu\hat{\iota}\alpha$ , where  $\gamma$  has developed itself out of the  $\epsilon$  of the diphthong, as in many other cases where Mullach (140) and before him Giese (295) have explained the  $\gamma$  with less probability as proceeding from  $f$ :  $\kappa\acute{\alpha}\nu\gamma\omega$  (pron.  $k\bar{a}vjo$ ),  $\kappa\lambda\acute{\alpha}\nu\gamma\omega$  (pron.  $kl\bar{a}jo$ ),  $\alpha\acute{\nu}\gamma\acute{o}-\nu$  (pron.  $avj\acute{o}$ ) 'egg,' which comes, as we saw at No. 597, from  $\bar{a}vja-m$ . This mod. Greek  $\gamma$  pronounced as a spirant is, strictly speaking, a surviving not a transmuted  $j$ . Since in the Teutonic family  $g$  is sometimes developed from  $j$  (Grimm 'Gr.' i. 187, 220), the  $g$  of the OHG. plural  $eig-ir$  and the English  $egg$  no doubt also corresponds to this spirant<sup>1</sup>. [Cp. March 'Anglo-Saxon Grammar' § 28.] — The people of Salamis in Cyprus called sulphur

have adopted it and used it to some purpose. — Passow 'Philol.' xx. 587 treats at great length of  $\epsilon v$  in proper names.

<sup>1</sup> Joh. Schmidt, who at 'Ztschr.' xxiii. 291 ff. discusses at length the change of  $j$  to  $g$ , denies this change for German at the beginning of his paper, maintaining that the fact that  $g$  succeeds to the

θέαγον according to Hesych. With M. Schmidt (Ztschr. ix. 368) we must here compare the γ with the ι of the Ionic form θεήιον, i. e. regard γ as a means of writing j. — The case of the glossematic word ἄγουρος is peculiar. In Byzantine authors this word occurs in two senses; it is used for 'young people' and also as an adjective in the sense of 'unripe,' e. g. ἔλαιον ἄγουρον 'oil from unripe olives' (ὀμφάκινον). Cp. Stephanus 'Thes.' In the second meaning the word is in general identified with ἄωρος, which means the same thing, and as we concluded at No. 522 that ὥρα had originally an initial j, we may unhesitatingly regard the γ of the word ἄγουρος 'unripe' as the successor to a j. The only doubt remaining is whether γ is merely the sign for  
 613 a still surviving j or a representative of an earlier j. For ου in place of an Old-Gk. ω I may refer to Deffner 'Neograeca,' 'Stud.' iv. 302 ff. (e. g. *psumí* = ψωμίον. At p. 308 of the same paper ἄγυρίδα is mentioned as still current in the sense of ὀμφαξ. Then comes the question is ἄγουρος ἔφηβος the same word, and did it likewise come from ἄωρος 'unripe' with a reference to the 'fresh green' of youth? The history of this ἄγουρος is a somewhat complicated one. It occurs in Eustathius ad 'Odys.' p. 1788, 56 in a collection of ὀνόματα

position of a j presupposes a pronunciation of g as a spirant, that accordingly the OHG. *gehan* was really pronounced *jehan*. I am not in a position to test the correctness of this assertion. Granted however that it is correct, still in the English *egg* this change, however it be explained, is an established fact, as Joh. Schmidt p. 295 himself admits for this word and also for the Italian *rimango*, *salgo*. In the German *Gischt* too we pronounce a g which has arisen from a j. It appears to me that we cannot be too careful in such questions to distinguish between the facts and their explanation. I have only maintained that as a fact γ takes the place of a j in Greek too in certain cases; whether it does so directly or by means of certain intermediate steps, and by what steps, are different questions. Consequently, when Joh. Schmidt p. 292 maintains that 'the assumption of a direct change of j to g is a mistake,' this remark does not concern me at all, but it is foreign to my purpose to enter upon the distinctions of physiological phonetics which he holds necessary for establishing the connexion of the two sounds, while I am much inclined to adopt a great deal of what he says.



*ἡλικίας*, the main body of which at all events (cp. Nauck 'Aristoph. fragm.' p. 88 sqq.) comes from Aristophanes of Byzantium: 'Ἀχαιοὶ δὲ (i. e. τοὺς ἐφήβους καλοῦσι) κούρους· Θρᾷκες δὲ ἀγούρους. This would lead us to reckon the word a Thracian one, were it not that the added *ὡσαύτως καὶ Ἀττικοί* recommends caution and that the passage in the 'Etymologicum Gudianum' p. 124, which elsewhere corresponds word for word with the above, has in place of *Θρᾷκες* the senseless *καδες* which Nauck rightly interprets *Ἀρκάδες*. Thus we see that our authorities furnish no warrant for the assumption that we have here to do with a Thracian word and Fick's ingenuity in identifying the word ('Spr. d. Indog. Eur.' p. 421) — with Joh. Schmidt's hearty approbation — with the Zend *aghru* = Skt. *āgru* 'unmarried,' is this time thrown away. It is probable on the other hand that this *ἄγουρος* was also a genuine Greek word and identical with the other. If Nauck is right ('Mélanges Gréco-Romains' ii. 329, cp. L. Bekker on the Odyssey η 64), *ἄγουρος* actually occurred in the Odyssey of Aristophanes Byzantius: τὸν μὲν ἄγουρον ἐόντα βάλ' ἀργυρότοξος Ἀπόλλων | νυμφίον ἐν μεγάρῳ μίαν οἶν παῖδα λιπόντα instead of the *ἄκουρον* of the MSS. and, it appears, of Aris-<sup>614</sup>tarchus. If so *ἄγουρος* must have counted as an antiquated word in the Alexandrian period.

*σωγᾶσαι* *σῶσαι* Hesych. by the side of *σῳάδδαι* παρατηρεῖ clearly shows that there was once a spirant between *ω* and *α*. This spirant I formerly assumed to have been a *j*, in which case the stem-word would have been a \**σῳίω-s* formed from *σῶος*, and from this would have come \**σῳιάζω* like *μετριάζω* from *μέτριω-s*. Nevertheless I grant to Joh. Schmidt ('Ztschr.' xxiii. 296) that it is also possible that \**σῳγάζω* arose from \**σῳφο-s* as *δοκιμάζω* did from *δόκιμο-s* and that the common representation of *f* by *γ* makes this the more probable of the two (cp. Fick ii<sup>3</sup>. 255). — On the other hand I cannot agree with the same scholar in denying that in *ποτικλαίγω* the *γ*, as Meister 'Stud.' iv. 428 was the first to recognize, arose from a *j*. This *κλαίγω* (cp. *ποτίκλαιγον*) is clearly a dialectic variety of the old Attic *κλήω*, later *κλείω* ('shut') and *γ* arose from *j* perhaps in the way indicated by Joh. Schmidt, through an intermediate *gj*. There is no analogy in Greek

word-formation for the assumption that *κλαίγω* is a denominative verb formed from the Dor. *κλαῖξ*, acc. *κλαῖκ-α*, found on the inscription from Andania. Apart from the weakening of the *κ* to *γ*, which seems to me no trifle, the Greek language can, if we except a very few verbs (e.g. the Homeric *θέρμετο*), show no evident denominatives without some derivative syllable in the present-stem. The assumed *\*κλακ-ω* would be as unheard of as, say a *\*φυλακ-ω* or *\*φορμιγγ-ω* instead of *φυλάσσω* *φορμίζω*. Cp. 'Greek Verb' p. 229.

Are we able then to find analogies to these processes partly confined to late Greek, partly to particular dialects only, from the ordinary Greek of early times? This question must be answered in the negative<sup>1</sup>. In proof of the fact that *γ* was pronounced soft in certain combinations of sound and in particular after *ι*, attention has been called to its instability, e.g. in the Boeotian *ίών*, *ίώ* (Ahrens 'Aeol.' 206) — hardly *ίών* — for *έγών*, *έγώ*, in the Tarentine *όλίος* = *όλίγο-ς* (Ahrens 'Dor.' 87), which however is ridiculed in Hyperbolus by the comic writer Plato (Herodian ii. 926 ed. Lentz), and consequently was a pronunciation known in Attica, in *σίαλο-ν* 615 'spittle' (*σαῖνα*), *σίαλο-ς* 'fat' by the side of *σιγαλό-εις* 'shining' (Lobeck 'Prolegg.' 341, cp. Fick i<sup>3</sup>. 843), and in *Φιαλία* by the side of *Φιγαλία*. In none of these words however can it be proved that the *γ* came from the *ι*, while in some the relation of the two letters is the converse. As regards the numerous future, aorist and derivative formations not only Epic but also specially Doric, which show a *ξ* where the present has a *ζ* it will be enough here to refer to my 'Greek Verb' p. 452 ff.

<sup>1</sup> The assumption that the Gk. rt. *γεμ* preserved in the Homeric *γέντο* 'grasped' and in Hesychius' glosses *ἀπόγεμ' ἀφελκε*, *ἔγγεμος* *συλλαβή* *Σαλαμίνοι* (by the side of the enigmatical *γένου* *Κύπριοι* *καὶ* *λαβέ* *καὶ* *κάθιζε*) is identical with the Skt. *jam* 'hold,' 'bind,' I retract, now that Fick ii<sup>3</sup>. 344 has without assuming any irregular sound-change connected the rt. *γεμ* with the ChSl. *zim-a*, inf. *zē-ti* 'comprimere.' The Lat. *em-ere* is to be referred to a rt. *am* 'take' (cp. No. 449 b).



B. Relation of  $j$  to  $\zeta$  and  $\delta$ .

The representation of an original  $j$  by  $\zeta$  is a fact universally recognized, but it can only be understood and explained in connexion with a large number of other facts. We have here to do with wide-spread phenomena, of which only a portion have been hitherto recognized, while others have been here and there guessed at, and many have not yet been even mentioned: so that it seems best to throw the discussion which follows into the form of a connected investigation.

1.  $\zeta$  as the representative of  $dj$ .

It is universally acknowledged that  $\zeta$  frequently represents a  $dj$  occurring before the Greek language was formed. The process of change was undoubtedly that stated by Schleicher ('Zur Vergl. Sprachengeschichte' p. 40 ff.). Under the influence of the soft dental consonant the palatal spirant, which followed it, passed over to the dental organ, changing into the sound which in French, Bohemian, and Polish is denoted by  $z$ , while we Germans distinguish it in pronunciation as a soft  $s$ , although we represent it by the same character as the hard or sharp  $s$  [German  $z$  being pronounced as  $ts$ ].  $\zeta$ , which is shown by its influence in prosody to be a double consonant, is the expression in writing of  $dz$ <sup>1</sup>. The following are certain instances of the representation of an older  $dj$  by  $\zeta$ :

<sup>1</sup> This view of the sound of the  $\zeta$ , widely held, I believe, among German philologists, is disputed by Ascoli 'Krit. Stud.' p. 364. A. denies that there is any explosive element in  $\zeta$ , the pronunciation of which he represents by  $zz$ , i. e. (cp. 'Vorles. üb. Lautlehre' p. 22) as I should write it  $zz$ , that is to say a doubled or thickly pronounced soft or sonant  $s$ , as it is pronounced e.g. in the Low German *drusseln*. Certainly this was the sound of the  $\zeta$  in the later classical period, that which the Romans tried to reproduce by  $ss$  (*atticisso*). It survives thinned down to a single  $z$  among the modern Greeks. But several reasons may be adduced in support of the view that at an earlier date the  $d$ -sound, to which etymology so often points, was not yet extinct in the  $\zeta$ , above all the Lesbian metathesis to  $\sigma\delta$  and the origin of  $\zeta$  from  $\delta$  on Greek soil. A. quotes in support of the simple nature of the  $\zeta$ , which he maintains, the fact that  $\zeta$  does not make

The name *Zēús* has been mentioned already under the rt. *diF* (No. 269). L. Havet in the 'Mémoires' ii. 177 has made it very probable that for this stem we must start from the disyllabic primitive form *diu*. This primitive form appears (1) with a transition from *i* into *j* before consonantal suffixes in Sanskrit, e.g. in the instrum. pl. *djū-bhis* ('with the days'). By addition of sound there arises the form *djav* Gk. *Zēv*, whence the voc. *Zēv̄*, nom. *Zēús*, and further, as the *u* before vocalic suffixes became a consonant Skt. *djav* (e.g. loc. *djav-i*), Osc. *ΔιουF* in the dat. *ΔιουFει* (Mommsen 'Unterit. Dial.' 191), and with the addition of a stem-forming *i*, the OLat. nom. *Diōv-i-s*, and finally with the loss of the initial *d* *Jōvi-s* as a nom. sing., and by a kind of contraction *Jū*, in the Umbrian *Ju-pater* Lat. *Juppiter* (Corssen 'Ausprache' i. 365). — (2) The second change of *\*diu* consists in the *u* before vowels becoming a half-vowel, hence producing *div*. We are obliged to assume a verbal rt. *div*, if only on account of the Skt. *dē-vá-s* (cp. above p. 519), which cannot possibly be derived from the shorter stem *dī* by means of the suffix *-va*. For the stems with this suffix never, according to Lindner ('Altind. Nominalbildung' p. 105), raise the vowel of the stem. The stem *div* occurs in the Skt. acc. *div-am* = *ΔιF-α*, gen. *div-ás* = *ΔιF-ός*, loc. *div-í* = *ΔιF-ί*, and also in the derived *diō-s* = Skt. *divjā-s*, Lat. *dīvo-s* and in the OHG. *Zio*. For *deu-s* see above p. 513, and cp. Grassmann 'Ztschr.' xi. 3.

The most numerous difficulties are presented by the forms which have not retained anything either of *u* or of *v*, like the Ved. acc. sing. *djā-m* = Gk. *Zḡ-ν* (e.g. Ξ 265) at the

position in Homer in *Zeλεια* and *Zákynthos*: but his translator has pointed out correctly, that it is only so that these proper names can fit into the verse. Hence that a line ends *ἄστυ Zeλείης* Δ 103 no more proves anything for the simple pronunciation of the ζ, than *ποταμοῖο Σκαμάνδρον* Α 499 does for that of σκ. Besides, a syllable before ζ in the middle of a word is invariably long. Modern Greek dialects in some words retain the pronunciation *dz* which we assume for the old ζ, e.g. *dzarkádion* (= *ζορκάδιον*), *dzákonos* (= *διάκονος*), *dzávuλος* (= *διάβολος*) and also in Locr. *ándzelos* = *ἄγγελος* (Chalkiopoulos 'Stud.' v. 358 f.).



end of a verse (Leo Meyer 'Ztschr.' v. 373). Even Gottfr. Hermann 'El. doctr. metr.' 351 saw that there was no place here for apostrophe, and I. Bekker and Lachmann (in 'Lucret.' p. 81) agree with him. So *Δίαν τὸν οὐρανὸν Πέρσαι* (cp. Herod. i. 131). If we do not choose to refer these forms to the shorter rt. *di*, the *ν* must have disappeared entirely, much as in the Skt. acc. *gā-m* 'cow' = Dor. *βῶ-ν* (st. *gav*). The nom. to this *Zḡ-ν*, i. e. *Zḡ-s* (like Dor. *λερῆς* = *λερεύ-s*) is quoted by Herodian (ii. 911, 8) from Pherecydes, and also 617 *Zá-s*, from which came also the metaplastic form *Zαντ-ός* (like *στά-s*, *σάντ-os*). [Bekker 'Anecd.' 1181, 1184]. — The forms current from Homer *Zḡ-ν-ός*, *Zḡ-ν-ί*, *Zḡ-ν-α* are based upon an expansion with *ν* like the plur. *ῖ-ν-ες* beside *ῖ-s* (No. 592). — Finally we have still to mention forms, in which there appears no appended vowel after *ι*, like the nom. *Δί-s*, for which Herodian is also our authority, and the stem *Δει* (doubtless only a corruption for *Δι* in *Δει-πάτυρο-s* *θεὸς παρὰ Στυμφαίοις*, Hesych.). I have shown, I believe, in my 'Quaestiones etymologicae' (Kiel 1856) that we have in this Epirote name of a divinity an old compound, to be compared with Umbr. *Ju-pater*, with a paragogic ending, as in *Αντίπατρος*, *Σώπατρος* and a *ν* (cp. *δια-πρύ-σιο-s*) dulled from *ε* (cp. *εὐπατέρεια*).

The forms in which *ζ* is represented by *δ* are discussed on p. 620.

We go on to the instances in which, within the limits of the Greek dialects, we detect a transition from *δι* before a vowel to *ζ*. Evidently these changes have been effected considerably later.

In the Aeolic dialect of Lesbos the transition from *δι* to *ζ* is a fact often mentioned by the old grammarians. Ahrens p. 46 quotes from the fragments of the Aeolic poets, and from citations of the grammarians the following instances: *ζά* = *διά* in *ζὰ νυκτός*, *ζάβατος*, *ζάδηλος*, *ζαλεξάμαν*, *ζαβάλλειν*, *Ζόννυσος*<sup>1</sup> = *Διόνυσος*. There is further from the nearly related Cyprian *ζάει* *πνεῖ Κύπριοι*, no doubt explained correctly by M. Schmidt as for *δι-άει*, *ζακόρεια* *θυσία* *Ἀφροδίτης* according

<sup>1</sup> The form *\*Ζόννυξος* ('C. I.' 2167) has no support, since Conze in his 'Reise auf Lesbos' Plate ix. 1, 5 showed that the reading was *τῶ θεῶ* (*Ζοννύσω*, according to which in line 3 of the same inscription the

hard to reconcile. For no one of these words, except *vanád* (rt. *van* 'desire'), is a root to be discovered. Latin does not present a single stem in *ad* or *əd*, but a few in *id*, hardly more than *lapid*, *capid*, *cassid*, *cuspid*, *promulsid*, and a still smaller number in *d*: *fraud*, *laud*, in the case of which it is not even certain that the *d* is to be taken as a suffix. Among the stems in *id capid* (nom. *capis* 'goblet'), assuming that it is not a foreign word (cp. on No. 34), admits most easily of being referred to a rt. *kap*, *lap-id* Fick ii<sup>3</sup>. 218 attractively compares with λέπας 'rock,' 'cliff.' Still Λάπιθο-s, the name of a mountain in Arcadia, readily occurs to us, so that we might trace back the *d*, as is always legitimate within a Latin word, to an original *dh*. The greatest degree of likeness is presented by *pecu-d* beside *pecu*, which is like ἐρι-δ beside ἐρι and may be immediately compared with χλα-μν-δ, προσ-ηλυ-δ. *hērēd*, *mercēd*, *custōd* with their long vowels, evidently secondary  
 638 formations, have absolutely nothing corresponding to them in Greek. We can therefore at most say that a *very* small number of Latin stems in *d* bear a certain resemblance to the common nouns in -ιδ and -υδ, while the widely diffused employment of the suffixes -ιδ, -υδ, -αδ to form feminine personal names and diminutives has absolutely nothing corresponding to it among the Romans, and, besides this, the *d* in Latin cannot in any single form be with certainty proved to be a sound identical with δ. Hence as early as my essay 'De nom. form.' pp. 6-10 I endeavoured to show that this δ did not belong either to the stem or to the suffix, as an integral part. This was recognized by Kuhn in his review of this essay ('Jahrb. f. wissensch. Kritik' 1843 p. 31) at any rate for some important classes of forms, with the addition that this δ seemed to have originated from a *j*. This remark, although accompanied by phonetic analyses, which differ from the views here stated, suggested to me the whole of the investigation of the relation of δ to *j* here given. It was indeed a very natural idea to explain a sound which was as rare in other languages as it is common in Greek, from phonetic tendencies, which are limited to Greek.

In the criticisms which my theory has met with recently, strangely enough the fact upon which I support it especially,



trissimus; 'cp. also Eng. *thorough*]. *διά* is indeed itself derived from *δFια*, as has been shown under No. 277; and this proves the fact—which is remarkable phonetically—that the sound *j* was still present in Greek after the loss of the *F* from this sound-group. On the other hand Hartung's connexion of this *ζά* with *ἄγαν*, and even with Skt. *saha* ('Partikeln' i. 355) is to be absolutely rejected. — *διακόσιοι*, is scanned as four syllables (*πεντάκι διακόσιοι*) in Anthol. xi. 146, on which Lobeck 'El.' ii. 106 justly remarks: 'fortasse *ζακόσιοι* audiri voluit.' Only we must remember here that Hartel 'Homer. Stud.' iii. 15 deals with the word from the points of view mentioned on p. 606. *ζ* is pronounced as a single letter.

b. In the middle of a word.

Here we must quote in the first place those present stems in *ζ*, which are derived from verbal stems in *δ*. For it has been proved long ago that this *δ* became *ζ* by its union with the formative syllable of the present stem. Verbs of this kind with roots in *δ* are: *ἔξ-ο-μαι* rt. *ἐδ* (No. 280), *ῥέξ-ω* rt. *ὀδ* (No. 288), *σχιζ-ω* rt. *χιδ* (No. 295), *χέξ-ω* rt. *χεδ* (No. 186). Cp. 'Greek Verb' pp. 201 ff. and especially p. 222 ff.

The noun-ending *-ια* unites with a preceding *δ* to form *-ζα* in the Aeol. *κάρζα* = *καρδία* (Ahr. 46) [cp. Aesch. 'Supp.' 71, 'Theb.' 288 Dind.], in *ἀργυρό-πεζα*, *κνανό-πεζα*, *τρά-πεζα* (for *τετρα-πεζα*), the origin of which from *-πεδ-ια* (cp. Lat. *acuped-iu-s* No. 2) cannot be doubted (Leo Meyer 'Bemerk.' p. 63). From the same root, also with the vowel *ε*, come the simple words *πεζό-ς* 'pedestris' = *πεδ-ιο-ς*, *πέζα* 'foot', 'edge' = *πεδ-ια* (No. 291). — In *χάλαζα* we recognized (No. 181) the st *χαλαδ*, which was referred to Indo-Germ. *ghrād*. — *χθι-ζό-ς* 'of yesterday', *πρωι-ζό-ς* 'of the day before yesterday', certainly contain a stem *διFo* (cp. Lat. *die-s*) which we discussed under No. 269 and under *δοάν*, *δῆν* p. 572 and p. 588. — From the same rt. *διF*, or, what comes to the same thing for the phonetic change to be discussed here, from the shorter rt. *δι* of the same meaning, comes *ἀρί-ζηλο-ς*, the second part of which is equivalent to *δῆλο-ς*: *ἀρί-ζηλοι* *δέ οἱ αὐγαί* (N 244), *ἀριζήλη φωνή* (Σ 219). I. Bekker indeed ('Hom. Bl.' i. 291) divides the word into *ἀρις-δηλο-ς*, regarding *ἀρις*, on the score

of the proper name Ἀρίσβη, as a by-form of ἀρι (cp. ἀμφὶ ἀμφίς, πολλάκι πολλάκις). But the origination of ζ from σδ, to which we return below, is by no means a well-established process, and we need no postulated form, if we derive the word from ἀρι-δῖηλο-ς δῆλος is evidently directly for δῖ-ηλο-ς. The same form probably occurs in δῖ-αλο-ν φανερόν (Hesych.), where the α is no doubt long, as being the Doric representative of η (cp. διάλας φανεράς). But ἀρί-ζηλο-ς is the regular transmutation of ἀρι-δῖηλο-ς. In the common form δῆλο-ς the j also has been completely lost (cp. No. 269 and Schrader 'Stud.' x. 319). — Just as in the corresponding verbs, so in the substantives δίζη, σχίζα we may derive the ζ from dj. — ῥίζα (No. 515) was shown to be a transmutation of ρριδ-ja, ρραδ-ja.

## 2. ζ developed from gj through the intermediate stage dj.

The origination of ζ from gj is as universally recognized as its origination from a dj belonging to a stem. It is not probable that the ζ so originated was phonetically different from that just discussed. Here too ζ is a double consonant, the first element of which is dental. Hence to get from gj to ζ we must assume the intermediate stage dj<sup>1</sup>, or in other words, the guttural medial shifted to a dental before j, and then pursued the same course with the following j as the original δ. We shall soon see how important it is to keep this intermediate stage in view. The phonetic changes gj—dj—ζ we must recognize in the following cases.

Of present stems in ζ the following certainly belong here: ἄζ-ομαι cp. ἄγ-ιο-ς (No. 118), γογ-γύζ-ω (No. 136), κράζ-ω which was discussed on p. 534 (κέ-κραγ-α), νίζ-ω (No. 439), 620 ῥέζ-ω 'dye' (No. 154), ῥέζ-ω 'do' (No. 141), στάζ-ω 'drop' (σταγ-ών) στίζ-ω (No. 226), σφύζ-ω 'well' (σφυγ-μός-ς), and also some which have lost a nasal: κλάζ-ω (κλαγγή), πλάζ-ω (ἐπλάγχθη-ν No. 367), and various verbs in which the γ has perhaps (cp. above p. 535) been softened from κ, as in κλώζ-ω 'cluck' = glōc-i-o (Walter 'Ztschr.' xii. 410),

<sup>1</sup> I shall return on p. 666 to the view of Ascoli, which differs on this point, and is now developed fully in his 'Kritische Studien' p. 324 ff.



στενάζω (cp. στενάχω No. 220), σαλπίζω: this is certainly the case in πλάζω. We see from this that the softening of  $\kappa$  to  $\gamma$ , mentioned above, is older than the transformation of the  $j$ .

Of the comparatives of less usual formation we may thus explain μέζων (Ion. μέζων) = μεγ-ίων and Hom. ὑπ-ολίζων = ὀλιγ-ίων (No. 553).

Similarly noun-formations like μάζα by the side of μάγ-ειρο- $s$  with a softened guttural (No. 455) and φύζα from the rt. φυγ, cp. fug-ιο (No. 163). In both we must assume the suffix  $-ia$ . The adjectives φυζα-κινό- $s$  (N 102) φυζαλέο- $s$ , φυζηλό- $s$  and Hesiod's ἀ-φύζα- $s$  (Schol. on  $\Phi$  528) seem explicable from the noun-stem φυζα. On πεφυζότες cp. p. 491, on the remarkable ζεύσασθαι = γεύσασθαι p. 486.

For ζά-ω on p. 491 we assumed an origin in γιά-ω.

### 3. $\delta$ and $\delta\delta$ as representatives of $\delta j$ .

Over against the  $\zeta$  of ordinary Greek, whatever its origin, there stands in various dialects a  $\delta$  at the beginning, or in the middle of words frequently a  $\delta\delta$ . Although I do not agree with Ascoli as to the phonetic value of  $\zeta$ , I am inclined to follow him in holding that the  $\zeta$  can claim on the whole the priority over  $\delta$  or  $\delta\delta$ . Cp. Beermann 'Stud.' ix. 69.

#### (a) initial $\delta = dj$ ( $\zeta$ ).

It is well known that by the side of the forms of Ζεύ- $s$  beginning with Ζ (p. 616) there are others in several dialects beginning with Δ<sup>1</sup>. The forms Δεύ- $s$  (Aristoph. 'Ach.' 911) and Δάν (cp. Ζάν) are Boeotian (Ahr. 'Aeol.' 175), the former also Laconian (Ahr. 'Dor.' 95). Herodian 'π. μόν. λέξ.' ii. 911 (Lentz) quotes the nominative Δήν, the accusative of which

<sup>1</sup> οὐ Δάν, which is well established in Theocr. iv. 17, vii. 39 also belongs here, if with Ahrens ('Philol.' xxiii. 206) we regard it as parallel to the Hom. Ζῆν. Ahrens assumes the same for the Attic formulae of protestation φεῦ δᾶ, πόποι δᾶ, οἰοί δᾶ, ἄλευ' ᾶ δᾶ, and this is confirmed by other instances of the representation of an original  $dj$  by  $\delta$ . The long  $a$  is to be compared with that of Ἀθάνα (Soph. . . . . 14 [and always in Tragg., cp. Ellendt in voc.]). [On the explanation (e. g. Paley in Theocr. iv. 17, Aesch. 'Prom.' 1 Liddell and Scott s. v. δᾶ), δᾶ = γῆ, see above p. 492].

beside *Αὔλιδ-α* (v. 88), and conversely *φρον-τίδ-ος* by the side  
 341 of *πίσ-τι-ος*. There is certainly no consistency of practice,  
 for we have genitives like *ἔριδ-ος*, *ὄπιδ-ος*, but in the acc.  
*ἔρι-ν*, *ὄπι-ν* by the side of *ἔριδ-α*, *ὄπιδ-α*<sup>1</sup>.

Among the personal feminines in *-ι* with an accessory *δ* the patronymics deserve to be brought into especial prominence. The Skt. *-ī* serves for precisely the same purpose, and indeed with the same accentuation of the vowel (Bopp 'Vergl. Gr.' iii<sup>2</sup>. 376): *Drāupad-ī* daughter of *Drupada*, like *Πριαμί-ς* daughter of *Πρίαμο-ς*, so *Τανταλί-ς*, *Δαρδανί-ς*, *Τυνδαρί-ς*, etc. (Angermann 'Stud.' i. 1, 45 ff.). The final vowel is thrown away before the *ι* in both languages. After a consonant simply *ι* is added: *Πανδιον-ί-ς*. The diphthong *ευ* is in the Homeric dialect treated as in the gen.: *Νηρεύ-ς* *Νηρη-ί-ς*, i.e. *Νηρεϝ-ι-ς*, cp. *Νηρη-ος*, *Ἐρεχθη-ί-ς* (cp. Ebel 'Ztschr.' iv. 171). The feminine patronymic, however, in its formation quite agrees with numerous other half adjectival forms. It does not admit of doubt that *Πριαμίς* denoted originally 'she who belongs to Priam,' in whatever sense of the word<sup>2</sup>. Hence we have also feminine names of tribes, as in Pindar *Αἰολη-ί-ς* belonging to the masc. *Αἰολεύ-ς*, and in fact the meaning of such adjectives is extended to that of relation in the widest sense; thus *Ζ* 193 *τιμῆς βασιληίδος*, Pind. 'Ol.' i. 102 *βασιληίδα τιμήν*. Thus 'Αλαλκομενηί-ς' 'the protecting,' an epithet of Athene, is simply the feminine to the masc. 'Αλαλκομενέ-ς, a word which is quoted in 'E. M.' as an epithet of Zeus. Masculines in *-εύ-ς* as 'paraschematisms' from participial forms [i.e. formed from them by a change of inflexion], were discussed 'Ztschr.' iii. 79 and above p. 611. Cp. *Δαμναμενέ-ς* (Apoll. Rhod. i. 1131), *Ἰδομενέ-ς*. In forms like *βασιλ-ί-ς*, *Αἰολ-ί-ς*,

<sup>1</sup> Valuable collections as to the varying *δ* are to be found, not only in Kühner ('Ausf. Gr.' i. 329), but also in Bredow 'De dial. Herodotea' p. 268, and especially in Rzach 'Der Dialekt des Hesiodos' p. 405 and 'Grammatische Studien zu Apollonios Rhodios' (Vienna 1878) p. 78 f. To the last scholar I owe some of the more detailed information here given.

<sup>2</sup> The difficulties, which stand in the way of the view propounded by Benfey, that these words denote properly the wife, so that *Πριαμίδ-ης* means 'son of Priam's wife,' are stated by Pott ii<sup>2</sup>. 888.



*Eimer* 'pail,' but OHG. *eimpar* (from *përan* 'bear'), 'a vessel which can be lifted with one hand ;' ep. Grimm 'Dict.' iii. 111] *Zu-ber* [Eng. *tub*, OHG. *zui-par* 'lifted with two hands']. From *δίαγκλο-ν* there would then be formed on the one hand by assibilation of the ι *ζάγκλο-ν*, *ζάγκλη*, the name which the Sicels according to Thuc. vi. 4 gave to the sickle, on the other hand by the loss of the ι the forms *δάγκλον* and *Δάγκλη*. — In Aleman's *δοάν* = *divā-m*, too, discussed above (p. 572), the *j* has been similarly suppressed after *δ*, just as in the Lat. *dū-du-m* by the side of *diu* (Fleckeisen 'Jahrb.' 1870 p. 71), *bi-duu-m* for *bi-divu-m*. But also *δήν*, as distinguished from *πρωι-ζά* according to the explanation given on p. 619, has suffered the same loss. — Similarly by the side of *ζα-*, explained to be from *διά*, on p. 602, we have the form *δα-* in *δα-φο-ινός*, *δά-σκιο-ς*, probably also in *δά-πεδο-ν*. — Plato the comic poet 622 ridiculed Hyperbolus the demagogue for pronouncing *διητώμην* as *δητώμην* (Herodian ii. p. 926). We may conjecture that this pronunciation, censured as un-Attic, was not limited to this one man, but was more widely spread. We see from these last examples, scanty as they are, that the representation of *δι* or *δj* by a simple *δ* was not entirely limited to Aeolic and Doric dialects.

(b) *δδ* or *δ* for *dj* (*ζ*) in the middle of a word.

The Boeotian, Laconian, and Megarian dialects have *δδ* in the place of the ordinary Greek *ζ* in the middle of words (Ahr. 'Aeol.' 175, 'Dor.' 96): thus Boeot. *κριδδέμεν* for *κρίζειν* *γελᾶν*, Lat. *rīd-ēre*, where there is no doubt that the *δ* belongs to the stem. It is therefore certain that we must here presuppose \**κριδ-je-μεν*. Where the final letter of the root is a guttural, we must, as above, assume one more step; thus in the Megar. and Boeot. *μαδδ-δα* = *μαζα*, i. e. *μαδ-ja*, the earlier stage *μαγ-ja* (No. 455), Boeot. *σφάδδ-δω* = *σφαδ-jω*, *σφαγ-jω*, *σαλπιδδω* = *σαλπιδ-jω*, *σαλπιδ-jω*. Here belongs also the Boeot. *ρέδδ-δω* = *ρέζω*, which is of special interest to us, inasmuch as it explains the Attic and Ionic pres. *ῥεδω*. The rt. *Fepr* (No. 141), whence come *ῥγ-ον*, *ῥ-οργ-α*, when the expanding *j* of the present was added, must have *g* -*jω*, *Feprδ-jω*. According to the analogy of *σφαδ*.

ought to have had from  $F\epsilon\rho\delta-j\omega$   $*F\epsilon\rho\zeta\omega$ , but after  $\rho\delta$  the spirant was entirely lost, and we only find a trace of it in the dentalizing of the  $\gamma$ :  $F\acute{\epsilon}\rho\delta\omega$ . By metathesis  $F\epsilon\rho\gamma$  became  $F\rho\epsilon\gamma$  (cp.  $\delta\epsilon\rho\kappa$  —  $\delta\rho\alpha\kappa$ ,  $F\epsilon\rho$  —  $F\rho\epsilon$ ), and this form too made its present by the addition of the  $j$ :  $F\rho\epsilon\gamma-j\omega$ ,  $F\rho\epsilon\delta-j\omega$  Boeot.  $\rho\acute{\epsilon}\delta-\delta\omega$ , Ion.  $\rho\acute{\epsilon}\zeta\omega$ , for here the  $\zeta$  could easily be pronounced after the vowel. To formations of the latter kind belong also  $\rho\epsilon\chi-\theta\acute{\epsilon}-\nu$ ,  $\rho\epsilon\kappa-\tau\acute{o}-s$  (cp.  $\acute{\epsilon}\rho\rho\acute{\eta}-\theta\eta-\nu$ ,  $\rho\acute{\eta}-\tau\acute{o}-s$ ). Even Buttmann ('A. Gr.' ii. 286) justly called attention to the entirely corresponding metathesis in the Eng. *wrought* by the side of *work*. But neither he, nor the earlier comparative grammarians (cp. Benfey i. 84, Christ 245) succeeded in explaining the  $\delta$ , which is limited to the present stem. Some indeed thought of entirely separating the rts.  $\acute{\epsilon}\rho$  and  $\acute{\epsilon}\rho\delta$  (Pictet 'Ztschr.' v. 47). Ahrens 'Formenl.' p. 108 comes nearest to the truth. Only he incorrectly brings in the Lesbian Aeolic forms in  $-\sigma\delta$ . But we cannot at all prove the existence of  $*\acute{\epsilon}\rho\sigma\delta\omega$ . The  $\delta$  of  $\acute{\epsilon}\rho\delta\omega$  I regard as an indisputable proof of my contention that  $\delta$  as a representative of  $\zeta$  was not entirely unknown even to the Attic dialect. I lay the more stress upon this because

623 of Corssen's attack ('Ital. Sprachkunde' p. 360). — There is a similar instance of an  $\iota$ , which has passed into  $j$  and has disappeared altogether, in the present  $\delta\epsilon\acute{\iota}-\delta-\omega$ <sup>1</sup>, which is to be traced back to  $\delta\epsilon\iota-\delta\iota-\omega$ ,  $\delta\epsilon\iota-\delta j-\omega$  (No. 268). We must regard  $\delta\epsilon\acute{\iota}-\delta-\omega$  as analogous to the Syracusan perfects with the inflexion of a present  $\delta\epsilon\delta\acute{o}\iota\kappa\omega$ ,  $\acute{o}\lambda\acute{o}\lambda\omega$  (Ahr. 'Dor.' 329): one word of this kind has become established in the usage of

<sup>1</sup>  $\delta\epsilon\acute{\iota}\delta\omega$ , which occurs only in the 1 sing., is found in the MSS. in seven places of the Iliad and in four of the Odyssey, and frequently, e. g. K 39, A 470, without any variant, though sometimes with the variant  $\delta\epsilon\acute{\iota}\delta\iota\alpha$ , which at  $\Sigma$  54 is referred to Aristophanes. Nauck desires to introduce the latter reading everywhere, and explains  $\delta\epsilon\acute{\iota}\delta\omega$  as an invention of late grammarians ('Mélanges' iv. 340). I see no reason for such a view. [But cp. Cobet 'Misc. Crit.' p. 270]. In  $\delta\epsilon\iota\delta\acute{\eta}\mu\omicron\nu\epsilon\varsigma$  also (I 56), though this again is doubted by Nauck, we cannot fail to assume a loss of the  $\iota$ : cp.  $\mu\alpha\chi\acute{\eta}\mu\omega\nu$ ,  $\acute{\epsilon}\theta\epsilon\lambda\acute{\eta}\mu\omega\nu$ . The notion of Mahlow ('Ztschr.' xxiv. 293) that  $\delta\epsilon\acute{\iota}\delta\omega$  was produced from a form  $*\delta\epsilon\iota-\delta\omicron\iota\alpha$ ,  $*\delta\epsilon\iota-\delta\omicron-a$ , quite without analogy, by a contraction just as unprecedented — when was  $\acute{\alpha}\kappa\acute{\eta}\kappa\omicron\alpha$  contracted into  $*\acute{\alpha}\kappa\acute{\eta}\kappa\omega$  or  $\delta\acute{\epsilon}\delta\eta\epsilon$  into  $\delta\acute{\epsilon}\delta\eta$ ? — hardly needs refutation.



ordinary Greek, *ῆκ-ω*, always with a perfect meaning; cp. 'Gk. Verb' p. 394. [Cp. *στήκω* and *γρηγορῶ* in N. T. Greek: Moulton's 'Winer' p. 26.] — Finally we must place here also the isolated forms *διαφυλάδεν* = *διαφυλάσσειν*, *διαφυλάδων* = *διαφυλάσσω* on the same inscription of the Vaxians of Teos (No. 3059, l. 11 and 18), which has supplied us already with other remarkable forms, the counterpart as it were of *Τῆνα* by the side of *Ζῆνα*. The simple *δ* here, it appears, corresponds to a *ζ*, just as much as in the Boeotian *γραμματίδω* beside *γραμματίδδω* (Beermann 'Stud.' ix. 68). We shall meet with other traces of an interchange between verbs in *-ζω* and *-σσω* (cp. also *πλάζω* and *πλήσσω* No. 367). The modern Greek *διαφυλάγω* is remarkably analogous, for here, as Maurophrydes shows 'Ztschr.' vii. 143, the *γ* has the sound of a spirant. We should therefore have, if we take in modern Greek, to assume two by-forms of *φυλάσσω*, i. e. *\*φυλάζω* (represented by *φυλάδω*), and *\*φυλάω*, represented by *φυλάζω* (cp. *πεινάζω*, etc.).

#### 4. *j* or *ι* with a *δ* prefixed.

No one doubts that *ζ*, especially when initial, often corresponds to a *j* in the cognate languages. But scholars were for the most part contented with this etymological agreement, without arriving at any clear idea of the phonetic relation of the two sounds, one to the other. Schleicher was the first who, in his essay 'Zur vergleichenden Sprachengeschichte' recognized this, and irrefutably established it on p. 48. If we have hitherto seen *ζ* proceeding directly from *dj*, and therefore defined it phonetically as *dz*, it follows from this that, where *ζ* corresponds etymologically to a *j*, a *d* has been prefixed to it.

Now to this process we have not a few parallels in other languages. From Modern Greek I have in earlier editions 624 quoted here the word *διάκι* = *ολάκιον* 'rudder.' According to a kind communication from Michael Deffner of Athens the exact pronunciation of this widely current word in ordinary Greek is *δjáiki*. The prefixed sound is pronounced as an interdental spirant, and the *ov* syllable, owing to the influence of the *i* of the following syllable has undergone the epenthesis, so common in Greek, which

patronymic the  $\alpha$  was for a time long by position before two consonants \**Βορεαδῆ-ος* \**Βορεαδ-ς*. Here the  $\alpha$  was shortened as in the Dor. acc. *χώρᾱ-ας* from *χωρᾱ-νς*, as in the Ion. *ἔσσω* (*ἔσσῶ*) for *ἥσσω*, as in *δικάζω*, *ἐδίκᾱσα* from *ἐδίκασσα* by the side of *δικᾱ*, or as in the Aeol. 3 plur. *ἐφίλεν* and the genitive of the participle *φιλέντ-ος*, in both cases as a result of  $\nu\tau$ . For those who take  $\delta$  as a derivative consonant, the shortness of the vowel before  $\delta$  in part is in the highest degree inconvenient. Neither *Κρονί-δης* agrees, as Bréal 'Mém.' i. 207 thinks, with *τεχνί-της*, nor *Αἰνείᾱ-δης* with *Τεγεᾶ-της*.

It will not be necessary for our purpose to enter more minutely into the other stems in  $-\alpha\delta$ . But we may just remark that the greater number of them easily lend themselves to our view. By far the majority of these stems consists of feminines, which have by their side masculines in  $-ο$ : *γυμνά-ς* and *γυμνό-ς*, *λευκά-ς* and *λευκό-ς*. These are related to *Βορεά-ς* as *ἔτοιμά-ζω* to *δικά-ζω*, i.e. the vowel  $\alpha$  has been in the one case retained in both forms, in the other only in the derived form. *γυμνά-ς* is therefore immediately connected with *γυμνά-ξ-ο-μαι*. Hence we may here assume a \**γυμνα-δι-ς* with just the same right as above a \**Βορεα-δι-ς*. We need not explain in detail how such stems are used in very different ways, partly through the ellipse of a substantive (*όλκά-ς*, i.e. *ναῦς*, *Ὀλυμπιά-ς*, i.e. *ἐορτή*), partly through that use of the feminine in an abstract sense, which is so common with the Greeks (*ἁμαρτά-ς* 'fault,' *μονά-ς* 'unity,' cp. *ἡ θερμή* 'warmth'). This is the less necessary that here, just as in the diminutival use of the suffix, we find the fullest analogy with the nouns in  $-ιδ$ , the origin of which presented less difficulties. There is only one class which will not lend itself to our theory, the adjectives of both genders like *νομά-ς*, *μιγά-ς*, *δρομά-ς*, *λογά-ς*, *φυγά-ς*. But there are hardly a dozen of these, and  
645 among them it is only the five mentioned, which are in common use, and these not before Herodotus. Many occur, either altogether or as masculines, only in isolated examples in the poets. Whether we are here to assume an illegitimate transference to the masculine gender, or whether we are



tions of the Keltic *dd* to an original *j*, which Stokes discusses 625 in Kuhn's 'Beiträge' viii. 350, when we draw the deductions from this comparison.

Here we have in the first place to point out the facts.

a. ζ = j.

ζειαί [δ 41, 604 cp. Hayman's note], later ζεά 'spelt,' whence ζεί-δωρο-ς ἄρουρα, is connected with Skt. *jáva-s* 'corn,' 'barley,' *jáva-sa-m* 'grass,' the Zd. *yava* (m.) 'field produce,' whence *yévin* (m.) 'fields,' and the Lith. *jáva-s* 'grain,' any kind of corn, pl. *jáva-i* 'corn on the stalk,' *jáv-ėnà* 'stubble' (Bopp 'Gl.,' Kuhn 'Zur ältesten Gesch.' p. 14, Pott i<sup>1</sup>. 35). On the ι in the middle of the word cp. p. 577. The connexion with ειαί, εἶοι ὀσπρίων καθάρματα 'pods,' 'shells,' ἥια 'chaff,' conjectured by ancient and modern grammarians (Lobeck 'El.' i. 100, Legerlotz 'Ztschr.' vii. 296, Zacher 'Nom. in αἰος' p. 71) still seems to me doubtful, though certainly εἶα χόρτος, i. e. 'fodder,' in Suidas would supply a link between them. There is however a considerable difference in the meanings. Besides I know no word in which an initial *j* is represented sometimes by ζ, sometimes by the spiritus lenis. It is possible that ἥια and ειαί are connected with Skt. *sasá* 'grass,' 'herb,' 'straw,' *sasjá-m* 'seed,' 'fruit of the field;' cp. Cymr. *haidd* 'barley' (Rhys 'RevueCelt.' ii. 115).

ζε-ω from the rt. ζεc = Skt. *jas*, according to the 'Pet. Dict.' 'to bubble' (of boiling liquids), 'to fatigue oneself,' OHG. *jēs*, has been discussed under No. 567.

The words ζημ-ία 'penalty,' 'loss' and ζη-τρο-ς 'executioner'<sup>1</sup> (δημόκοινος Hesych.), probably go back to one and the same root, which we may perhaps compare (Bopp 'Gl.,' Benf. ii. 201, 'Ztschr.' viii. 89) with the Skt. *jam* 'hold,'

<sup>1</sup> Fick 'Ztschr.' xxii. 99 wishes to refer ζητρο-ς, which we know only from this one passage of Hesychius in the meaning of 'executioner,' to ζη-τη-τρο-ς, and hence to ζητεῖν. But ζητεῖν does not occur at all in the sense of βασανίζειν, and the executioner is very different from the official charged with the duty of investigation. — As the ζητρεῖον τὸ τῶν δούλων κολαστήριον (Hesych.) consisted in a μιλῶν or *pistrinum* (cp. Pollux iii. 5) other explanations of the word have been attempted (Legerlotz 'Ztschr.' vii. 296). With the meaning 'instrument of punishment' it would come in here very well.

'rein in.' The vowel would be lengthened, as in *κρημ-νός* rt. *κρεμ* (No. 75), the nasal dropped before the suffix *-τρο*. The Sanskrit words *jātana-m* 'requital,' *jātanā* 'revenge,' 'pain,' which are connected with *jat* (mid.) 'strive,' but also 'requite,' show a remarkable similarity of use to that of our Greek words. Are we to deduce a rt. *jā*, and regard the Skt. *t* as well as the Gk. *μ* as of the nature of a suffix?

*ζητέω* is referred by Bopp 'Gl.' and Schleicher op. cit. p. 46 (cp. Fick i<sup>3</sup>. 182) to Skt. *jat*, which according to the 626 'Pet. Dict.' has also, especially in the middle, the meaning 'to strive after anything.' But in this case the length of the vowel remains surprising, and *ζημία* offers no sufficient analogy for it. The use of the Skt. causative *jātājāmi* is entirely different ['attach oneself to,' etc.]. We find a shorter stem in *ζητόρων* *ζητούντων* in Hesych., though with the addition *γράφουσι δὲ ἔνιοι ζητητόρων*, but in Photius merely with the explanation *ζητητών*, and in *ζί-εται* *ζητεῖται* (Hes., E. M.), which we may probably read with the diphthong, like the neighbouring *ζία* *κριθή* = *ζειά*. Thus we get a verb *ζε-ί-ω* (cp. *νεικέω*), *ζέ-ω* and a rt. *ζε*, which we may the more naturally connect with the equivalent Hom. *δί-ζημαι* later *δίζομαι* (Pott ii<sup>1</sup>. 36), in that Homer as a rule uses this verb for the notion of seeking, and only once (Ξ 258), uses *ζητέω*, which is so common a word in later writers. *δί-ζημαι* (by-form *δίζω*) is a reduplicated form = *δι-δῆ-μαι*, a present perfect like *ῆμαι*, *κεῖμαι* ('Greek Verb' p. 105 f.). *δ* as a reduplication for *ζ* is very noteworthy as an indication that unmistakably *ζ* originally contained *δ* as its first element. We are thus led to the conjecture (cp. Christ 151), that the rt. *ja* 'go,' 'attain,' 'strive' fixed itself in Greek also in the form *djā* *ζη*, and that in the special meaning of 'seek,' that *ζη-τέω* is related to this root as (*ἀμφις*-)*βη-τέω* (cp. *ἀμφισβασίη*, *ἀμφίς-βαίνα* and Lat. *amb-igo*, *amb-ig-uus*) to rt. *βα*, and that Skt. *jā-t* and also *jā-k* 'seek,' are to be regarded as only expansions of this same root<sup>1</sup>.

*ζίζυφο-ν* the tree, the fruit of which is called *juzubae*,

<sup>1</sup> The rt. *dī* 'shine' (cp. Fick i<sup>3</sup>. 108) connected by Brugman 'Morph. Unters.' i. 8, according to the 'Pet. Dict.' never has the presumed meaning 'see.' Hence there is no certain similarity in meaning.



whatever the source from which it got its name, shows unmistakeably the reduplicated form and the representation by ζ of the *j* retained in Latin (Benf. i. 686).

ζυγ-ό-ν in its relation to the rt. ζυγ ζεύγ-νν-μι, Skt. *jug-ā-m*, Lat. *jug-u-m*, etc. has been explained under No. 144; the form δνογό-ν in Plato we discussed on p. 612.

ζω-μός-ς 'broth,' would naturally be grouped with ζέ-ω, if we were limited to Greek alone; though ζύ-μη· φύραμα 'leaven' would be an objection in itself. If we compare, however, Skt. *jū-s*, *jūsha-s*, *jūsha-m* 'meat-soup,' Lat. *jūs*, Lith. *jūsžė* 'bad soup of leaven stirred up in water' (Nesselmann), ChSl. *jucha* (Schl. 'Ksl.' 133) and the Lett. *jau-t*, 'to stir meal into water,' quoted by Pott W. i. 1232, we arrive at an Indo-Germanic rt. *ju* with the meaning 'stir in,' 'mix.' Now 'to mingle' is a meaning actually established in the 'Pet. Dict.' for the simple rt. *ju*, elsewhere 'to bind,' and also for various compounds of this root (e.g. *pra-ju*) and *ā-jāv-ana-m* means 'spoon for stirring.' The ω is probably to be explained from a form with 'added sound' \**jau-ma-s*. The *ν* was suppressed, but it left behind the long vowel as in χῶ-μα 'heap' beside χέω (rt. χν No. 203) and in other cases discussed by Brugman 'Stud.' iv. 159 and above pp. 575, 578. Thus the famous μέλας ζωμός may rest upon a primitive tradition. It seems to me awkward to separate ζωμός from ζύμη, as Fick does (i<sup>3</sup>. 731) and to connect it with ζέω.

ζώ-νῃ, ζῶ-μα, ζω-σ-τήρ 'girdle,' 'girth,' ζώ-ννν-μι 'gird' seemed to be formed, by a phonetic developement quite analogous, from the rt. *ju*, which in Skt. means 'bind.' The Lith. *jūsta* 'girdle' seemed also to point to the rt. *ju*. But Pott W. i. 1243, and Fick i<sup>3</sup>. 732 have since pointed out the Zend words *yāōnh* 'put on,' *yāç-tō* 'girded,' and the ChSl. *po-jas-ŭ* ζώνη, *po-jas-a-ti* ζωνύναι (Miklos. 'Lex.' 654). As the meaning here suits still better, this grouping deserves the preference. The root is therefore *jas*. ζούσθω· ζωνύσθω (Hesych.) is for \*ζο-έ-σθω for \*ζοσ-έ-σθω, and belongs to a different form of the present.

On the other hand the attempt of Ahrens 'Ztschr.' iii. 165 and Legerlotz vii. 295 to refer the first element in ζώ-πυρο-ν

26] was jestingly formed after this analogy. On the other hand *νιδεύ-ς* is equivalent to *νιδούς*. *Βανκιδεύ-ς* is found 'C. I.' No. 106. *Μαιαδεῦ* in Hipponax 'Fr.' 10 as an appellation of Hermes may be a form intentionally made to resemble the names of beasts, for this well suits the tone of the fragment, which is very extravagant. Both forms meet also in the name of the old Attic tribe *Ἀργαδῆς* (nom. s. *Ἀργαδεύ-ς*), the Eponymus of which was named *Ἀργάδης* (Herod. v. 66). We might suppose a patronymic form here too, i. e. a *nomen agentis* \**ἀργό-ς* (cp. *συνεργό-ς*), whence the *Ἀργαδεῖς* would have got their name, as 'the sons of the labourers,' 'of the field labourers,' like the *Παμβωτάδαι* as 'the sons of the common herdsmen.' But it is certainly simpler to regard *Ἀργαδῆς* as a *nomen agentis* from *ἐργάζομαι*, in which, as in *κομι-δ-ή*, δ takes the place of j. And perhaps we ought to regard in the same way the *Ζεὺς Στοιχαδεύς* (as well as *Στοιχεύς*) 648 of the Sicyonians (Lobeck 'Prolegg.' 351), so named 'διότι κατὰ φυλὰς ἑαυτοὺς ἔταξαν καὶ ἡρίθμησαν.' *στοιχά-ς* is 'separated,' *στοιχίζειν* 'divide,' 'separate.'

ε. The adverbs in -*δα*, -*δον*, -*δην*, -*δισ*.

These adverbs, which are tolerably numerous, especially in the language of Homer, have been thoroughly discussed by Leo Meyer 'Ztschr.' vi. 287 ff. They are there traced back to the Skt. suffix -*tva*, which presents a certain similarity, especially in the employment of the instrumental -*tvā* to form gerunds, e. g. *ga-tvā* (rt. *gam*), compared with *βάδην*. But the phonetic change from *tv* to δ cannot be satisfactorily established. Subsequently Leo Meyer connected all adverbial forms in δ with the Indian adjectives in -*tja* ('Or. u. Occ.' ii. 603, 'Vergl. Gr.' ii. 385), but there is nothing convincing in this, from the point of view either of form, for there is no reason whatever for the softening of τ into δ, or of meaning, for in Sanskrit this is that of necessity, which is foreign to our words. The words corresponding to these Indian adjectives are rather Greek adjectives like *ἄξιό-ς*, *ὑπόψιο-ς*, *γνήσιο-ς*, Latin ones like *anxiu-s*. And the identity of the adverbs in -*δην* or -*δην* with the Latin adverbs in -*tim*, which he asserts, is the less admissible, in that we have actually in Greek itself adverbs in -*τί* like *ἐγερ-τί*, *ὀνομασ-τί*, *δωρισ-τί*, *μονω-τί*



(1) The opponents of the view maintained by Bopp and myself assume for the most part that the oldest stratum of the numerous verbs in *-αζω*, *-ιζω* came from nominal stems in *δ* by the coalescence of the final letter of the stem with a derivative *j* to form *ζ*, and hence that a form like \**ἐλπιδ-jω* became *ἐλπίζω*, just as \**ὀδ-ζω* certainly became *ὀζω*. That then on the analogy of a number of verbs so formed, many more were formed by adding *-αζω*, *-ιζω* to the most varied nominal stems, without any regard to the final letter. I do not at all deny in principle the possibility of such an origin. E.g. the verbs formed from *n*-stems, like *ἀφραίνω*, *δειμαίνω*, *ποιμαίνω*, have evidently been the pattern for *χαλεπαίνω*, *λευκαίνω*, *μενεαίνω*. But the stock of verbs in *-αζω* and *-ιζω* is by no means favourable to such an assumption. Verbs such as might be desired from this point of view, e.g. \**λαμπάζω* from *λαμπάς*, *νομάζω* from *νομάς* do not exist. Leo Meyer ('Vergl. Gr.' i. 47) endeavours in vain to hunt up a single derived verb in *-αζω*, in which the *ζ* arose in the way mentioned. Who can believe that the Homeric *πεμπάζεσθαι* 'to count on the five fingers' came from the abstract substantive *ἡ πεμπάς* 'quintity' which occurs first in the Attic writers, or that *μιγάδεσθαι ἐν φιλοσῆτι* (*θ* 271) came from *μιγάδ-ες* 'mongrels.' The attempts are quite desperate to force *τοξάζεσθαι* out of *τοξότης*, *ἱππάζεσθαι* out of *ἱππότης* with a weakening of *τ* to *δ*. It remains the simple fact that out of forty-two verbs in *-αζω*, quoted by Leo Meyer, not a single one goes back to a nominal stem with *δ*. Hence if we were absolutely resolved to hold to analogy, we should have to suppose that for the verbs in *-αζω* it started from *lost* patterns. Perhaps some individual worshippers of this favourite resource do not shrink from even this hypothesis. — The case is somewhat different with the verbs in *-ιζω*. Here there is the st. *παιδ* beside *παίζω*, *ἐριδ* beside *ερίζω*, *ληιδ* beside *ληίζω*, the Homeric *ἐλπιδ* beside the post-Homeric *ἐλπίζω*. But of the sixty-seven verbs in *-ιζω* with a dental characteristic, besides those mentioned there are at most two or three, for which this origin has no difficulties. Leo Meyer, in order to obtain instances, has again to resort to the most perilous : tions, e.g. to refer the Homeric *ἐταιρίζσαι* 'to a

ἑταιρίσασθαι 'to associate oneself,' to ἑταιρίς 'amica,' a diminutive from ἑταίρα in Xenophon, ἀποικίσαι (μ 135) to ἀποικίς, the feminine of ἀποικος, which is used later on, by understanding πόλις, even for ἀποικία. Hence the assumed origin of the verbs in -ίζω is not in any way probable, except in a surprisingly small number of instances, while the enormous majority of these verbs go back to stems ending in vowels, in σ, or in nasals. It is also worth mentioning that Fick in Bezzenb. 'Beitr.' i. 324 ff. has made the exactly opposite attempt, to establish the verbs in -αζω, -ιζω as the source of the nominal stems in δ, though with regard to this attempt, as to other similar ones of this acute inquirer, I reserve my judgement until he has completely published his view as to the origin of such verbal stems. The history of the Greek language is however decidedly not in favour of these attempts, for many of the verbs in -αζω and -ιζω, which he compares, are known to us only from a time much later than the nominal forms, which are said to have been derived from them.

(2) If then this widely prevalent view is attended by great difficulties, another might possibly be tried, which has not been put forward, so far as I know, by any one, but which is not far removed from the theories favoured, e. g. by Corssen ('Ital. Sprachkunde' p. 363 ff.), viz. to see in the ζ a suffix -δο, supposing that, e. g. to the stem δικα first a suffix -δο was appended (\*δικα-δο), and that δικά-ζω came from δικα-δ-ζω, as from φαρμα-κο, φαρμακ-ζω, φαρμάσσω. But where are such nouns to be found? Corssen has endeavoured to point out such, but those which he adduces are partly words where δ belongs to the root, like κέλαδ-ο-ς (see below p. 730), partly obscure words like ὄμα-δο-ς or names of places, perhaps not even of Greek origin like Τένεδος, Ἀβύδος. \*χαν-δό-ς, which as an adjective plays a prominent part with Corssen, is quite apocryphal. We have authority only for the Homeric χανδόν [φ 294 only] 'greedily,' also in Callimachus 'Frag.' 109, and the imitation of this verse in 'Anthol. Pal.' Append. 361, 4  
 630 where ἐκ χανδῆς κύλικος is the traditional reading, but one corrected long ago by the editors, cannot possibly prove the existence of this abnormal form (Lobeck 'Paralip.' 149). Besides, even in the little troop of these shadowy existences,



brought together with so much pains, there is not a single one, which is accompanied by a verb in ζ. For the Homeric *ὀπάζειν* (rt. ἐπ σεν) cannot be derived without violence from *ὀπηδός*-s (Dor. *ὀπαδός*), for the denominative of this is rather *ὀπηδέω*. And *ὀπαδός*-s belongs to the rt. πεδ (cp. *πηδάω*) rather than rt. ἐπ.

(3) On the contrary everything becomes plain and clear, as soon as we regard the ζ as the successor of j. As from the Skt. *svana* 'sound' comes *svaná-ja-ti* 'he sounds,' so from *δικᾱ* comes *δικάζειν*, from *σκια* *σκιάζειν*. Naturally the α also represents the ο of the ο-stems: *λιθάζειν*, just as e.g. in *αἶθα-λο-s* from *αἶθο*, and loses an ν in *ὀνομάζειν* (st. *ὀνομαν*). The relations to pure α-stems are especially plain in frequentatives, such as *οἰνοποτάζειν*, *ῥυστάζειν*. The verbs in -ιζω fall into two divisions, those in which the ι belongs to the stem, e.g. *χαρί-ζω*, *ύβρί-ζω*, and those in which ι has originated from an old α through the intermediate stage of an -εζω, which has not disappeared entirely, without leaving any traces ('Greek Verb' p. 241 f.): *νομίζω*, *αἰνίζω*. Of course both methods of formation subsequently extend beyond their original sphere: e.g. *θαμίζω* (*θαμα*), *άγων-ι-ζομαι*.

(4) The view that the j of these denominatives sometimes became ζ, and sometimes was dropped, is greatly strengthened by the extensive variation in the language between the two formations, e.g. *άγαπάζω* and *άγαπάω*, both Homeric, *αἰνέω* and *αἰνίζω*, *άκάχησε* beside *άκαχίζω*, -κτί-μενος and *κτιζω*, on which I have given further evidence in the 'Greek Verb' p. 235 ff. We have a remarkable form to confirm the close relationship between the verbs in εω and those in ζω in the Cyprian *καλήζω* cited by Herodian ii. 332 beside the Lesbian *καλήω*. The primitive form of both was \**καλέζω* ('Greek Verb' p. 248). One of the most far-reaching anomalies of the Greek verb, the sporadic σ, which appears in the perfect middle, in the passive stem with θ, and in numerous nominal stems (*ἔσπασται*, *μνησθῆναι*, *γνωστός*, *χρησμός*) is best explained, as I think I have shown in 'Greek Verb' p. 522 ff., from the early wavering of the language between the two types.

(5) Now is the principle, that one and the same primitive

651 p. 264 ff.). Both apparently point to verbs in *-αῖνω*, *-ἰνω*. It will of course be understood, as I repeat in conclusion, that my view does not go so far as to maintain that in every single case the *δ* has passed through the developement from *j* or *i*, which we assumed for the genesis of the type. — As regards the relation of the suffixes *-δο-ν*, *-δη-ν*, *-δα* to *-διο*, etc., I should not like to maintain now with the same positiveness as before, that the latter forms are the source of the former, and hence that a *j* has been lost after every *δ*. Corssen, who discusses these formations on p. 366—unfortunately with very slight regard to the different stages in the history of the Greek language—may possibly be right in holding, in accordance with the doctrine of the old grammarians (Lobeck 'Prolegg.' 351, 'Paralipp.' 156), that the adverbs in *-δο-ν*, *-δα*, etc. are the more primitive, and those in *-δια*, *-διην*, etc. are derived from them. It is possible that *σχέ-δίη-ν* may have come, not indeed from the adverb *σχέ-δόν* itself, but perhaps from its stem *σχέ-δο*, which survives only in the adverbial accusative form, and *κατ-ωμά-διο-ς* from *κατ-ωμα-δο* like *ἐλευθέρ-ιο-ς* from *ἐλευθερο*. Thus we should understand why the *ι* is as firmly attached in the one formation as it is foreign to the other. But there are certainly forms like the Homeric *κρυπτά-διο-ς*, in the case of which the by-form without *ι* is wanting, and I think I have established the possibility of the sequence of sounds *-ja*, *-διο* for other formations like *διχθά-διο-ς* on p. 634. But my derivation of the *δ* by no means falls, as Corssen thought, with this changed succession. If *σχέ-δό-ν* is to be regarded as the antecedent to *σχέ-διο-ς*, then here *δ* alone is the representative of *j*, a phenomenon which has frequently met us. At the close of our investigation I shall endeavour to make this process still more clear in its phonetic aspect. We should have the series \**σχέ-jo*, *σχέ-δο*, *σχέ-δ-ιο*.

ζ. *δ* for *j* in particular verbal forms.

Instead of the Homeric form of the present *ἀμέρδ-ω* 'deprive,' Pindar has *ἀμείρ-ω*. It is natural to derive both forms from a third underlying both, *ἀμέρ-j-ω*. The root is *μερ* (No. 467) 'divide,' 'apportion,' to which *ἀμέρδ-ω* is related as *ἀτίζω*, *ἀτίω* to the rt. *τι* 'honour.' We must give *expertem facere* as the fundamental meaning, and must certainly assign another



root, i. e. *μαρ* 'shine' (cp. p. 567) for the second meaning of *ἀμέρδειν* 'blind'; so that the verb, when it has this meaning, is to be compared with *ἀμανροῦν*. Lobeck's attempt ('*Rhemat.*' 74) to connect the two meanings is certainly unsuccessful.

Before the endings *-αται* and *-ατο* of the perfect and pluperfect middle we sometimes find the sound *δ*. The particular forms have been quoted by me in the '*Gk. Verb.*' p. 67<sup>1</sup>. In 652 *ἐρράδαται* (v 354, *ἐρράδατο* M 431), as in *ἐρηρέδατ'* (pres. *ἐρείδω*) the *δ* belongs to the root. Under No. 253 we saw that the root was *ἀρδ*, by metathesis *ράδ*. The forms which remain are *ἀγωνίδαται* (Herod. ix. 26), *κεχωρίδαται* (i. 140), *ἐσκενάδαται* (iv. 58), *παρεσκενάδατο* (iii. 150), *διακεκρίδαται*, which is not found before Dio Cassius (lii. 5), and the Homeric forms *ἀκηχέδατ'* (P 637), *ἐληλέδατ'* (η 86). The first four forms correspond to present stems in *ζ* just as *δωδα* does to the present *δίζω*, or *ἔδος* by the side of *ἔζετο*. If, as we assume, *ζ* may be divided into the elements *δ* and *z* (*odzo*, *agonidzomai*), we can understand how forms of the latter kind follow the lead of those of the former kind, i. e. how the second element, that which represents a *j*, came to be regarded universally as a sign of the present, and the verbal stem as ending with a *δ*. The older fashion, which Dorism retained, was discussed on p. 632. It is in these forms and some few noun-forms, which are to be discussed immediately, that the reference of derived verbs with *-ίζω*, *-αζω* in the present, as well as primitive verbs (*δίζω*, *σχίζω*), in practical Greek grammar, to a verbal stem in *δ*, finds its justification. The isolated Homeric *ἀκηχέδατ'*, on the other hand, answers to the equally isolated *ἀκαχέατο* (M 179, I. Bekker *ἀκαχήατο*) and may serve as a finger-post to point out to us the relation of the verbs in *-ζω* to those in *-εω*, which we touched upon above (p. 630). The *ι* of *-ίζω* has come from *ε*, like that of *ῖζω* (rt. *ἔδ*), *χθιζός* (*χθίς*). We may deduce a form *ἀκαχε-δ-jω* with the same justice as *ἐδ-jω*. Now in *ἀκηχέδατ'* by the side of *ἀκαχίζω* we actually find, I believe, this hypothetical *ε*, and similarly in *ἀκηχεδ-όν-ες* *λύπαι* (Hesych.), but with *ἀκαχέατο*, if the traditional authority in its favour is cor-

<sup>1</sup> *ἀπείσπάδατο*, quoted by Lobeck ad '*Ajac.*' 403, is not certain. The MS. of Hesych. has *ἀπείσπάδατο* *ἀπείστησεν*. M. Schmidt marks the gloss as suspicious, if only because the alphabetical sequence is not observed.

words seems to occur in ἀκεῖσθαι 'heal' (Delph. ἐφακεῖσθαι 'C. I. G.' 1688 l. 37), ἡκα 'gently,' 'softly,' ἀκέων 'silent,' ἀκασκα ['gently,' Bergk on Pind. 'Pyth.' iv. 276] ἀκασκαῖος ['gentle,' Aesch. 'Ag.' 741] (Fick 'Ztschr.' xx. 173). αἶκ-αλο-ς, from which αἰκάλλω is derived, would be for ἀκ-ιαλο-ς, as κραιπάλη is conjecturally for κραπ-ιαλη (No. 41). As -αλο is a diminutive suffix (Schwabe p. 78), κραιπάλη might be the diminutive of a lost κραπια (cp. μανία), and ἀκ-ιαλο-ς the adjectival diminutive from ἀκ-ιο-ς (cp. ἄγ-ιο-ς). The Lat. *crāpula* is evidently a borrowed word. A similar suffix apparently occurs in ἡπίαλο-ς 'fever.' — After a π we notice the same process in ἐξαίφνης with aspiration (p. 502) for ἐξαπίνης, αἰφνίδιος, etc. (cp. ἄφνω, ἀφνίδιος Hesych.), in κραιπνό-ς for κραπ-ινο-ς (No. 41), in δεῖπνο-ν for δεπ-ινο-ν, δαπ-ινο-ν (Lat. *dapinare* No. 261). — σκοῖψ· ψώρα (Hesych.) has already been compared by Lobeck 'Paralipp.' 113 with *scab-ie-s*. It might easily be for σκοφ-ι-ς. — In the case of ροῖβ-δο-ς, ροῖζο-ς we learnt on p. 650 to see still more clearly that an ι has made its way from the termination into the stem-syllable. — Finally it seems that even the dental consonants cannot be entirely excluded. For with regard to the diphthong in forms like φέρεις for φερ-ε-σι = Skt. *bhār-a-si*, and φέρει for φερ-ε-τι = Skt. *bhār-a-ti*, the theory, according to which φερ-ε-σι first became φερ-ει-σι and φερ-ε-τι φερ-ει-τι, deserves the preference over others if only because ει belongs to all the Greek dialects, including the Doric, while the change from τι into σι, which has been assumed by some in order to get thereby to a simple ι (ε-τι, ε-σι, ε-ι) is entirely unknown to the Dorians. Cp. 'Greek Verb' p. 140 ff. No one can fail to see too that κρέισσων has come from κρετ-ζων, from which the later Ionians and a portion of the Dorians (Ahrens 'Dor.' 188) formed κρέσσω<sup>1</sup>. The diphthong appears just as plainly in connexion with σ in χραισμ-έ-ω for χρᾱσιμ-ε-ω (χρήσιμο-ς). Whether πλαῖσ-ιο-ν

<sup>1</sup> At first sight the forms κρέσσω, μέζων might seem older than the Attic forms. But probably they owe their origin only to that disinclination to the connexion of ει with double consonants, in consequence of which ἀπόδειξις in New Ionic became ἀπόδεξις. The inscription from Chios (Cauer 133) furnishes in l. 16 the hitherto unknown ἀποδέκ-νυντες.



'square' for  $\pi\lambda a\theta\text{-}\iota o\text{-}\nu$  belongs to the st.  $\pi\lambda a\theta$ ,  $\pi\lambda\acute{a}\theta\text{-}\alpha\nu o\text{-}\nu$  'platter' (No. 367 b) may be left undecided. In some of these cases recourse has been had by some to the device of regarding  $ai$  as merely a 'strengthening' of  $a$ . But for this process, which would be quite inconceivable in the case of a long  $a$ , the only support is to be found in the reduplicating syllables of  $\delta ai\text{-}\delta\acute{a}\lambda\lambda\omega$ ,  $\pi ai\text{-}\pi\acute{a}\lambda\lambda\omega$ , etc. which are themselves puzzling enough.

If this be, generally stated, the extent of this phonetic phenomenon, we have now to consider the way in which we should regard it. The question is whether it should be viewed as *epenthesis* or *metathesis*. Epenthesis is a phonetic process extremely widely prevalent in Zend, as is shown by Bopp 'Vgl. Gr.' i<sup>2</sup>. 70, Justi p. 359. The  $i$  or  $j$  of the following syllable makes the  $a$  of the preceding into  $ai$ : Skt.  $bh\acute{a}v\text{-}a\text{-}ti$  'he is,' Zd.  $bhav\text{-}ai\text{-}ti$  (cp.  $\phi\acute{u}\text{-}\epsilon i[\tau i]$ ), Skt. st.  $madhja$  (*medius*), Zend  $maidhya$ . In the same way  $u$  and  $v$  change the  $a$  of the preceding syllable into  $au$ , Skt.  $sar\text{-}va$  681 'whole,' Zd.  $haur\text{-}va$ . With the Zend epenthesis the German *Umlaut* agrees, except that in the latter the  $i$ -element of the termination is not added on to the vowel of the preceding syllable, but assimilates it to itself: OHG.  $vatar$  pl.  $vetir$  (Grimm 'Gr.' i<sup>3</sup>. 555, Schleicher 'Die deutsche Sprache' p. 144, Rumpelt § 45). A 'much older epenthesis' in the Teutonic sphere, e.g. in Goth.  $hail\text{-}s = kalja\text{-}s$  is treated of by Scherer 'Z. Gesch. d. deutschen Sprache' i<sup>1</sup> p. 472. In Irish epenthesis is very extensive, and increases in the course of time; e.g. OIr.  $laig\text{-}iu$  'minor' =  $\acute{\epsilon}\text{-}\lambda\acute{\alpha}\sigma\sigma\omega\nu$ ,  $aile = aliu\text{-}s$  Cypr.  $a\acute{\iota}\lambda o\text{-}s$ ,  $berid$  for  $bere\text{-}ti = \phi\acute{\epsilon}\rho e i$ ; it is sufficient here to refer to Zeuss<sup>2</sup> p. 4. Moore's 'Windisch' § 16 ff. In modern Greek, as Deffner 'Stud.' iv. 270 shows (but only, as he tells me in a letter, before the palatal sounds  $j$ ,  $k$ ,  $ch$ ), new diphthongs are developed by an 'anticipated'  $i$ :  $m\acute{a}i\chi i = \mu\acute{\alpha}\chi\eta$ ,  $\delta\acute{o}i\chi i = \delta\acute{o}\chi i$ ,  $\acute{o}\acute{\upsilon}\chi i$ . This phonetic change may well be called 'anticipatory sound' (*Vorklang*), inasmuch as the sound of the following syllable is naturally prepared for in the preceding syllable, by the speaker who has the whole of the word in his mind. According to the more recent views the consonants are always cooperating factors in the process of epenthesis.

- τάρβος 480.  
 ταργαίνω 480.  
 ταργάνη 381.  
 ταριχεύω 729.  
 τάριχος 729, 729.  
 ταρσιά, ταρσός 224.  
 ταρταρίζω 504.  
 ταρφέες, τάρφος 224.  
 τάρχη 729.  
 ταρχύω 729.  
 τάσις 217.  
 τάσσω 674.  
 τά τ' ἄλ 436.  
 Ταύγετος 226.  
 ταῦνας 226.  
 ταῦρος 218, 429, 567, 695.  
 ταῦς 226.  
 ταφή 512.  
 ταφῆσις 650.  
 τάφος (astonishment) 219, 429 504, 527, 695.  
 τάφος (burial) 512.  
 τάφος 512, 513.  
 τάχος 218.  
 ταχύς 196, 218, 507.  
 ταῶν, ταῶς 495.  
 τέ 138, 486, 487.  
 τε (pronom.) 21.  
 τέγγω 219, 455, 535, 711.  
 Τεγέα 186.  
 Τεγεάτης 644.  
 τέγη 186, 695.  
 τέγξις 219.  
 τέγος 56, 186, 429, 695.  
 τεθάφθαι 419.  
 τέθηπα 219, 527.  
 τείνω 64, 65, 217, 255, 664.  
 τείρεα 206.  
 Τειρεσίας 645.  
 τείρω 60, 222.  
 Τεισίας 489.  
 τειχεσιπλήτης 278.  
 τεῖχος 182, 220.  
 τείω 488, 489.  
 τείως 577.  
 τέκμαρ 58, 219, 594.  
 τεκμηριον 219.  
 Τέκμηρσα 219.  
 (τεκνίτης 417.)  
 τέκνον, τέκος 219.  
 τέκτων 58, 157, 219, 220, 431, 698.  
 τελαμών 220.  
 Τελαμωνιάδης, Τελαμωνιάς, Τελαμώνιος 635, 646.  
 τελέθω 63.  
 τέλειος 222, 610.  
 τελείω 68, 327.  
 Τελεμνήσης 730.  
 τέλειος 610.  
 τελευτή 222.  
 τελέω 222, 238, 327.  
 τέλλω 221, 488.  
 τέλος (end) 221, 222, 238, 488, 558, 587.  
 τέλος (tax) 221.  
 τέλσας 488.  
 τέλσον 487.  
 (τέλω 417.)  
 τέμαχος 212, 221, 222, 731.  
 τέμενος 221, 329, 510, 730.  
 τέμνω 221, 654, 677.  
 τέναγος 219.  
 τένδω 221.  
 Τένεδος 629.  
 τένθης 221.  
 τενοθηδών 239, 257.  
 τενοθήνη 257.  
 τένων 664.  
 τένων 217.  
 τέο, τέω ετο. 638.  
 τεύς 219.  
 τέραμον 216.  
 τέραμονος 475.  
 τέρας 206, 587, 695.  
 τέρεμος 430, 475.  
 τέρετρον 222, 729.  
 τέρειω 222, 223.  
 τέρην 223.  
 τερβεία 257.  
 τέρβρον 222.  
 τέρμα 222, 558.  
 τερμώεις 222.  
 τέρμος 222.  
 τέρμων 222.  
 τερπικίρανος 468.  
 τερπνός 224, 264.  
 τέρπω 224, 512.  
 τερπώλη 224.  
 τερπώμεθα 468.  
 τερσαίνω, τέρσομαι 224.  
 τέρτος 226.  
 τερύ 113, 223.  
 τερύνης 223.  
 τερύσκω 223.  
 τέρψις 224.  
 τέσσαρες 27, 487, 488, 537, 601, 665.  
 τεταγών 218.  
 τέτανος 217.  
 τέταρτος 488.  
 τέτορες 488.  
 τετράζω 225.  
 τετραίνω 222.  
 τετράκις 488.  
 τέτραξ 225.  
 τέτρατος 488.  
 τετράτρυφος 707.  
 τετραχθά 676.  
 τέτραχμον 710.  
 τετράων 225.  
 τετρεμαίνω 225.  
 τέτρηχα 729.  
 τέτριγα 695.  
 τέτριξ 225.  
 τέττα 225.  
 τετύκοντο 58, 219, 220, 507.  
 Τεύκρος 219, 507.  
 τεύξομαι 507.  
 τεύχος 219.  
 τεύχω 58, 219, 507.  
 τέφρα 35, 501, 502, 512.  
 τέφρος 501.  
 τέχνη 219, 502.  
 τεχνήτης 639.  
 τεχνίτης 644.  
 τή 64, 217.  
 τήγανον 218, 444, 535.  
 τηθαλλαδούς 255, 636.  
 τήθη (nurse) 252.  
 τήθη (grandmother) 255.  
 τηθίς 255.  
 τηκεδών 218, 653.  
 τήκω 61, 218, 444, 535.  
 τηλεθάω 137.  
 τηλεφανής 290.  
 τηλίκος 396.  
 τηλόθεν 469.  
 τηλύγετος 490.  
 τήμερον 394, 595.  
 τήμος 594.  
 Τήν 621, 623.  
 τήος 577, 594.  
 τητάομαι 213, 742.  
 τήτες 208, 394.  
 τί 27, 447, 489.  
 τιθασός 253.  
 τίθημι 62, 253, 254.  
 τιθήνη 252.  
 Τιθωνός 512.  
 τίκτω 58, 219, 677.  
 τιμάρος 346, 347.  
 τιμάω 488.  
 τιμή 488, 489.  
 τιμήεις 489.  
 τιμήμα 488, 489.  
 τιμήορος 347.  
 τιμητής 488.  
 τιμαρός 346, 347.  
 τινάγματα 490.  
 τιναγμός 490.  
 Τινάδιος 634.  
 τινάσσω 490, 725.  
 τίνυμαι 488.  
 τινύω 729.  
 τίνω 488, 729.  
 τίπτει 687.  
 τίρ 453.  
 τίριος 515, 520.  
 Τίρυνς 495.  
 τίς 453, 486, 489, 499.  
 τίσις 488.  
 τιταίνω 217.  
 Τίταν 605.  
 τίτθη 252, 253.  
 τίτθος 252.  
 τιτράω 222, 223.  
 τιτρώσκω 223, 710.  
 Τιτυός 226.  
 Τίτυρος 512, 605.  
 τίω 434, 488.  
 τίω, τίσις 490, 608.  
 Τλασίαφο 396, 450.  
 τλήμω 220.  
 τλήναι 220.  
 τλήντος 216.  
 Τμάρος 731.  
 τμήγω 221, 731.  
 τμήμα 221.  
 τμήσις 176, 634, 705.  
 Τμώλιος 556, 731.  
 τοῖς, τοῖρ 453.  
 τοῖχος 182, 183.  
 τόκα 487.  
 τοκεύς 219.  
 τόκος 187, 219, 252, 304.  
 τόλμα, τολμάω 220, 708.  
 τολμηρός 708.  
 τολμπεύω 221.  
 τολύπη 221, 730.  
 Τόμαρος 731.  
 τομάω 314, 320.  
 τομεύς, τομή 221.  
 τονθορύς 257.  
 τονθρύς 257.  
 τόνος 217, 695.  
 τοξάσσομαι 628.  
 τόξον 58, 219.  
 τοξότης 628.  
 τόπος 695.  
 τορεύω 222.  
 τórνος 222, 729.  
 τóρνος 729.  
 τóρος 222, 273.  
 τóρος 222.



- τοῦν 223.  
 τόσσαις 219.  
 τότε 487.  
 τοῦ, τούν 219.  
 τόφρα 687.  
 τρανής 222.  
 τράπεζα 382, 488, 618, 710.  
 τραπέομεν 224.  
 τραπέλος 558.  
 τραπέω 468.  
 τράπω 468.  
 τρασιά 224.  
 τραῦμα 223.  
 τραφερή 224.  
 τραφερός 558.  
 τρέ 77, 445.  
 τρεῖς 226.  
 τρέω 225, 665.  
 τρέμω 225.  
 τρέπω 52, 432, 468, 568.  
 τρέφω 224, 415, 512, 527.  
 τρέχω 196.  
 τρέω 225.  
 τρήρος 225, 646.  
 τρήρων 225, 646.  
 τριακοντούτης 208.  
 τρίβω 222, 223, 475, 713.  
 τριένος 546.  
 τρίζω 695.  
 τριήρης 342.  
 τρίναξ 501.  
 τριοπίς 464.  
 τριοττίς 464.  
 τρίς 226.  
 τρισσός 226.  
 τρίτατος 642.  
 τρίτος 226.  
 τρίχα 163, 675, 676.  
 τριχάϊκες 163.  
 τριχθά 675, 676.  
 Τροζήνιοι 632, 656.  
 Τροία 222, 632.  
 Τροίζην 222, 632.  
 Τροίζηνιοι 632, 656.  
 τρομερός 225.  
 τρομέω 225.  
 τρόμος 225.  
 τρόνα 224, 501.  
 τρόπιον 189.  
 τροπέϊον 468.  
 τροπή 189, 468.  
 τρόπις 468.  
 τρόπος 468.  
 τρόπος 568.  
 τρόπος 52, 468.  
 τροφαλῖς 527.  
 τρόφι 224.  
 τρόφιμος 679.  
 τρόχιλος 679.  
 τρόχης 196, 645.  
 τρόχος, τροχός 196.  
 τρυγάω 598, 599.  
 τρύγη 599.  
 τρυγηφάγος 723.  
 τρυγονάω 501.  
 τρύζω 695.  
 τρύμα 222.  
 τρύπα 223.  
 τρύπανον 74, 223.  
 τρυπάω 60, 223, 714.  
 τρύπη 60.  
 τρύσκω 223, 710.  
 τρυφάλεια 488, 710.  
 τρυφή 223.  
 τρύχω 222, 223, 710.  
 τρύω 60, 222, 710.  
 τρώκτης 468.  
 τρώξ 468.  
 Ττήνα 621, 674.  
 τύ 219, 442, 696.  
 τυγχάνω 219, 220, 507.  
 Τύδας 226.  
 Τυδεύς 226, 227, 695.  
 τύκον 667.  
 τύκος 58, 219, 507.  
 τύλη, τύλος, τυλώω 226.  
 τυμβογέρον 527.  
 τύμβος 527.  
 τυμβοχοεύω 527.  
 τύμμα 227.  
 τύμπανον 55, 227.  
 Τυμψηστός 228.  
 Τύμωλος 556, 731.  
 Τυνδάρεος, Τυνδάρεως, Τυνδάρης, Τυνδαριδᾶν, Τυνδάριχος 226.  
 Τυνδαρίς 641.  
 τυννός, τυννοῦτος 495.  
 τύπανον 55.  
 τυπάς 227.  
 τυπή 227.  
 τύπανον 55.  
 τυπάς 227.  
 τυπή 227.  
 τύπος 227, 499.  
 τύπτω 227, 429, 512, 65, 676, 695.  
 τύρβα, τυρβάω 227, 695.  
 τυρβασιά 227.  
 τυρβη 227, 381, 429, 695.  
 τυρεύομαι 227.  
 τυρίδω 354.  
 Τυρμίδαι 227.  
 τύρος 227.  
 Τύρραιος 635.  
 τυθός 253, 495.  
 τυφεδανός, τυφεδᾶν 228.  
 τυφλός 228.  
 τυφός 228, 527.  
 τυφω 49, 60, 228, 259.  
 τυφάν, τυφώς 228.  
 τύχη 219.  
 τῶνα 621.  
 v pronunciation 412;  
 v from orig. a 714 ff.; v from orig. u 411, 571;  
 v from j 612; v from f 563 ff.; v from f, fo 176, 245; v interchanged with i 716 ff.  
 τῶνα 382.  
 ὑάκινθος 279, 574.  
 ὑάλη 564, 576.  
 ὑάλον 395.  
 ὑάλομαι 564.  
 ὑάλος 395, 565.  
 ὕανθαι 574.  
 ὑανία 565.  
 ὕβλα 532.  
 ὑβός 529.  
 ὑβρίζω 630.  
 ὕβρις 290, 540.  
 ὕγγεμος 614.  
 ὕγεια 187.  
 ὕγιάζω, ὕγιαίνω, ὕγιαία 187.  
 ὕγιηρός 187.  
 ὕγιης 187, 678, 739.  
 ὕγραίνω 187.  
 ὕγρός 28, 187, 350.  
 ὕγρότης 187.  
 ὕδαρης, ὕδαρός 248.  
 ὕδατος ὕδνη 654.  
 ὕδερως 248.  
 ὕδω 248.  
 ὕδης 248.  
 ὕδνέω 249.  
 ὕδνη 654.  
 ὕδνης 242, 245, 248.  
 ὕδνης (watery) 249.  
 ὕδω 71, 249, 403.  
 ὕδρα 248.  
 ὕδραϊναι, ὕδρεύω 248.  
 ὕδρία 248.  
 ὕδρος 248.  
 ὕδρωψ 248.  
 ὕδω 248.  
 ὕδωρ 71, 72, 248, 249, 285, 523, 688.  
 ὕει 395 (bis).  
 ὕελη 380, 564.  
 ὕελος 395.  
 ὕεσις 376, 564.  
 ὕεστάκα 564.  
 ὕετης 208.  
 ὕετός 395.  
 ὕηνία 565.  
 ὕηνός 565.  
 ὕθλος 523.  
 ὕήν 564.  
 ὕιδεύς 647.  
 ὕιδούς 636, 647.  
 ὕιλη 564.  
 ὕιόν (wild vine) 564.  
 ὕιός 395, 566, 654.  
 ὕιωνός 391.  
 ὕλακόμωρος 330, 371.  
 ὕλακτέω 371.  
 ὕλάω 371.  
 ὕλη 109, 373.  
 ὕλεις 373.  
 ὕλημα 373.  
 ὕλία 373, 374.  
 ὕλλος 248.  
 ὕμεις 397, 687.  
 ὕμμες 397, 402, 687.  
 ὕμνέω 716.  
 ὕμνος 295.  
 ὕνις 382.  
 ὕννη 382.  
 ὕός 395.  
 ὕπαί 290.  
 ὕπαρχω 190.  
 ὕπατος 290.  
 ὕπερ 289, 290, 682.  
 ὕπενερθε 309.  
 ὕπερ 289, 290, 540, 688.  
 ὕπερα 289, 290, 540.  
 ὕπεράφανος 290.  
 ὕπερβιος 476.  
 ὕπερβύρειοι 348.  
 ὕπερβῶια 586.  
 ὕπερηγορέη 609.  
 ὕπερηφάνεια, ὕπερηφάνεων, ὕπερηφανός 290.  
 ὕπερθεν 289.  
 ὕπεριον 540.  
 ὕπερον 540.  
 ὕπερος 289, 540.  
 ὕπερτεῖλος 221.  
 ὕπερφευ 304, 718.  
 ὕπερφάλος 717.  
 ὕπερφυής 718.  
 ὕπερώιον 207, 586.  
 ὕψηνη 305, 306.

mann, who had hit upon the same idea as Ahrens, on p. 46 comes to the conclusion that a change of this kind cannot be established.

11. J as *ι* transposed into the preceding syllable.

We return finally to a phonetic process, which is universally recognized, and with which the only question can be as to its extent and its explanation. Good collections may be found in Christ p. 44, Leo Meyer i. 270 f., Pott ii<sup>2</sup>. 741. For all the Greek dialects, with the exception of the Asiatic Aeolic, it is the rule that *j*—or *ι*, for any sharp distinction is here impossible,—after *ν* and *ρ* is transferred to the preceding syllable, in the form of *ι*: *μελαν-ja*, *μέλαινα*, *κερ-ja*, *κείρω*, Aeol. *κέρρω*. After other consonants this phonetic change is more rare, but by no means unknown. In *όφείλω* indeed we can explain the diphthong only by compensatory lengthening, because in the old alphabet it was denoted by E, as is proved by Brugman 'Stud.' iv. 120. The desire to distinguish *όφέλλειν* from *όφείλειν* has perhaps contributed to this irregularity. But we saw on p. 357 that *αἰλος* was the Cyprian form for *ἄλλος*, i. e. *ἄλ-jo-s* (Lat. *al-iu-s*)<sup>1</sup>. In the case of explosives, the phenomenon appears in some clear instances—and Hugo Weber ought not to have denied it so positively in his 'Etym. Unters.' i. 66—as in *πείκ-ω* (σ 316)<sup>2</sup> by the side of *πέκ-ω* and *πέκ-τ-ω*, where perhaps the wish to distinguish the

<sup>1</sup> Probably the notice of the 'E.M.' belongs here also, *αἰλα· ἀντὶ τοῦ, καλά Κύπριοι* (p. 34, 10). We must write for *καλά ἄλλα* or *ἄλλά*. Or can the gloss have lost a *κ*, and fallen wrongly under *α*? *καἰλά* would be the Cyprian form which we should expect for *καλά*=\**καλja*.

<sup>2</sup> Möller, in his instructive and interesting essay 'Epenthese vor k-Lauten im Germanischen' 'Ztschr.' xxiv. 427 ff., has suggested for many phenomena belonging here the entirely new point of view, that a guttural, without the assistance of a following *i*, can produce by its own force an *i*-sound before itself. Hence he denies for many cases here discussed the previous existence of an *ι* in the following syllable. As *πλέκω*, *τέκος*, *ἐγώ*, *ἄγω*, etc. show, we can at most speak of a phonetic tendency, never of a phonetic law. But certainly many an *ι* hitherto inexplicable, e. g. that of *ἥρεκα* and *ὕγις* finds thus an explanation. This subject requires further careful investigation.



word from *πέσσω* 'cook,' prevented the usual treatment of <sup>679</sup> the *kj*, and also in the stem *γυναικ* which in 'Ztschr.' iv. 216 I have traced back to *γυναικ-ι* = Indo-G. *ganakī*. The suffix *k*, originally hypocoristic (cp. *sen-e-c-s*), to which the feminine termination *ī* is appended, finds a confirmation also in the Persian *žan-a-k* 'muliercula' from the same stem (No. 128), as is proved by Schwabe 'De deminut.' p. 45. The apportionment of the two stems to the different cases was not so firmly established as it might seem from the prevalent usage. The comic writer Pherecrates (fr. 95) used the acc. *γυνήν*, and *αἱ γυναῖ* is also quoted from a comedian (Meineke 'Com.' ed. min. i. p. 106). — Further, after *γ* in the comp. *μεί-ξων* = *μεγ-γων*, Ion. *μέζων*, in the st. *αἶγ* for *ἀγ-ι* (No. 120) nom. *αἶξ* 'goat,' in *αἶγ-λη* 'brightness' (No. 41), inasmuch as this may with probability be referred to *ἀγ-ιλη*, as the Skt. *ag-nī-s* = Lat. *ig-ni-s* suggests. To be sure a form like *ἀγ-ιλη* has analogies only in masculines like *στρόβ-ιλο-s*, *τρόχ-ιλο-s*, to which we may add *αἶκλοι* (Hesych. *αἱ γωνῖαι τοῦ βέλους*), discussed by Legerlotz 'Ztschr.' viii. 397, if it comes from *ἀκ-ιλοι* (cp. *aculeu-s*) and is to be referred to the rt. *ἀκ* (No. 2). In the same way *αἶχ-μή* 'spear-point,' with a *χ* which, as in *ἔγχ-ος*, has come from *κ* (p. 504), may be explained as for *ἀκ-ιμη*. We must probably take the word, which is common in Homer, and which can hardly be connected with *ἀίσσω*, in the Homeric dialect always trisyllabic, as an adjective (used as a substantive), after the analogy of *ἄλκ-ιμο-s*, *τρόφ-ιμο-s*, *πόρ-ιμο-s*. The stem-word would be *ἀκ-ί-s* 'point,' and *ἀκι-μη* would properly be 'the pointed.' So also Pott W. i. 516. Joh. Schmidt 'Vocal.' i. 76 adds Lith. *ėszma-s* 'javelin.' In two more words beginning with the same letters, we may conjecture that the origin of the diphthong was the same. The first is the Laconian *αἶκ-λο-ν* or *αἶκ-νο-ν* 'supper,' if any one chooses to be bold enough to connect it with the Skt. *ac* 'to eat,' *ἀε-α-να-m* 'eating,' 'food.' We may recall also the Homeric *ἄκ-ολο-s* 'bit' (p. 222) mentioned on p. 114<sup>1</sup>. — The case is much the same with *αἶκ-άλλειν* 'blandiri' and *αἶκαλο-s* *κόλαξ* (Hesych.). The root of these

<sup>1</sup> Baunack 'Stud.' x. 78 collects a long list of kindred glosses, among them *συν-αικ-λία* (Alcman), *ἀν-αἶκ-λ-εια* *ἄδειπνα*, *εἶκ-λο-ν* *δείπνον*, *ἴκ-να* *τροφεία*.

(Sievers 'Lautphysiologie' p. 143). In juxtaposition with *i* these become *mouillés*. For Greek however these processes escape our more precise knowledge.

According to these analogies I believe that in Greek also we must regard an *i* of this kind as in all cases the anticipation of an *i* or *j* which was from the first justified in the subsequent syllable. It is true that there are only a few instances in which the *i*, which would thus be expected, is actually found to exist in both syllables, viz. only four, the not very common *εἰνί* from *ἐνί*, which however is well authenticated five times in Homer in the formulas *εἰνὶ θρόνῳ*, *εἰνὶ θύρῃσι*, the two comparatives *κρείσσων*, *μείζων*, which warrant us in inferring *\*κρεῖτ-ιον*, *\*μειγ-ιον*, and finally *πλαίσιον*, though this is perhaps not very certain. We might possibly add *αἰρέω*, discussed on p. 557, if it points back to *Far-ιον*. In all the remaining instances of this phenomenon, i.e. in the numerous feminines in *-αῖνα*, *-εῖνα*, *-αῖρα*, in the presents in *-αῖνω*, *-εῖνω*, *-αῖρω*, *-εῖρω*, and in comparatives like *ἀμείνων*, *χείρων* the *i* has disappeared from the subsequent syllable. Perhaps this disappearance is to be explained psychologically. The speaker feels instinctively that this sound ought not to be sounded more than once in the single form, and so, after it has been anticipated, he drops it in the second syllable. Siegmund in his investigation of metathesis in 682 'Stud.' v. 126 ff. starts from similar considerations. It is well known from Teutonic languages that the so-called 'Umlaut' did not become very common, until the special cause of the phonetic change, the *i*, had disappeared from the subsequent syllable: OHG. *trāgi*, MHG. *traege*, OHG. *mohti*, MHG. *mochte*.

We may refer here also to the parallel epenthesis of *u*. The disfavour, which is now shown to all sporadic phonetic affections, has induced some scholars to deny this altogether. But three forms hardly admit of another explanation. The Homeric *πουλύ-ς* (*πουλύ-ν*, *πουλύ*) is quite parallel to *εἰνί*. Anticipation with a loss of the *u* in the subsequent syllable is shown in *ἐλαύνω*, i.e. *\*ἐλα-νυ-ω* ('Greek Verb' p. 171), in the words discussed on p. 567 f. *μαῦρο-ς* (*ἀμανρό-ς*), *παῦρο-ς* (?), *νεῦρο-ν*, and in *γεύνων*, i.e. *\*γε-νυ-ων* *γονάτων* Hesych.



mentioned under No. 137. On the other hand forms like γούνα, δουρί, οὔλο-ς ('whole' = Skt. *sārva-s*) may just as well have arisen by compensatory lengthening from γονῖα (γόννα), δορῖι, ὄλφο-ς, and this view we preferred on p. 569. If we possessed inscriptions in the alphabet in use before Euclides, which contained these forms, the question would be settled at once, according as ΟΥ or Ο was written in them.

That the εἰ of φθείρω, κτείνω, etc. did not originate, as Meunier 'Révue Critique' 1869 p. 246 conjectured, in the way of compensatory lengthening, but is to be regarded as a genuine εἰ, is proved not only by the parallel αἰ of καθαίρω, ὀνομαίνω, which absolutely excludes such an explanation, but also by the fact that the Dorians also had the diphthong in this place: φθείρω or φθαίρω (cp. a grammarian in Ahrens 'Dor.' 186), ΣΠΕΙΡΕΝ Cretan (C. I. G. No. 2556, l. 18: 'Greek Verb' p. 213). If the length of the stem-syllable was due to compensatory lengthening, it would necessarily have been \*φθήρω, \*σπήρεν. — For ὑπείρ = Skt. *upāri* cp. p. 290<sup>1</sup>.

<sup>1</sup> The attempt to explain the diphthongs of τείνω, φθείρω, etc. by compensatory lengthening is repeated by Frankfurter in his doctoral dissertation 'On the Epenthesis of j (i) f(v) in Greek' Göttingen 1879. But there are absolutely no Old Attic forms without ι, to justify the opinion that the diphthongs are in a large part of the cases hitherto explained by epenthesis, e.g. in the present forms in -εινω and -ειρω, and in the feminines in -εινα, only 'late Attic.' ΣΠΕΡΑΣ quoted on p. 40 does not belong here at all, for in 'C. I. A.' i. 322 a, 64 it is the acc. plur. of the substantive σπείρα. Even the aorist of the same form, if it was authenticated by inscriptions, would of course prove absolutely nothing for the present. On the other hand the Cretan ΣΠΕΙΡΕΝ cannot possibly be set aside offhand, as is done on p. 40, for EI as the lengthening of ε is, as every one knows, quite foreign to strict Doric. The Lesbian σπέρρω would necessarily have been \*σπήρω in Cretan, if the Cretan form had really originated from the Lesbian. But why could not σπέρρω have come from σπερ-ῖω in one dialect, and σπείρω in another by epenthesis? The Cyprian αἶλος, which cannot be argued away, beside the ordinary Greek ἄλλος, proves that the Greek dialects did not all proceed in the same way in this case. Frankfurter p. 34 remarks that in l. 26 of the inscription from Idaliūm ἰναλαλισμένα, said to be equivalent to ἐναλλαλισμένα (from \*ἐναλληλίζω) damages the authority for this αἶλος: but he forgets that this form has more recently been explained

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the spiritus asper and lenis, is a course that is impossible in the face of the influence which, in spite of isolated exceptions and aberrations on inscriptions, the spiritus asper exercises on the whole with perfect consistency on preceding tenues (*ἀφ' οὗ, ἐφίππιος*). Moreover in many districts of Greece, especially in Tarentum and Heraclea (Kirchhoff 'Stud. über d. gr. Alphabet' <sup>3</sup> p. 146), the sign *ι* was for a considerable time used for the spiritus asper. And how are we to believe that the grammarians, when they matured the doctrine of the *πνεύματα* and introduced new signs for them into the cursive alphabet, arrived at such a doctrine, if they had not the elements and data for it in the Greek of their time? But for all this the history of the *representation* of the aspirate, especially the early loss of the old letter for it, which was borrowed from the Phoenicians, and the grammatical distinction of the *πνεύματα*, as something falling under the head of *προσφδία*, has an important bearing on the history of the sound itself. The Asiatic Aeolians, who were peculiarly *ψιλωτικοί*, and the Ionians, who allowed the aspirates no influence upon the preceding tenuis after an elision (*ἀπ' οὗ, κάτοδος*), evidently took the lead in the weakening of the aspirate. Indeed even in Homer we find forms like *ἦδος* by the side of *ἡδύς, οὐλος* by the side of *δλος*. The expulsion of the spiritus asper began in the earliest period of Greek and certainly became more and more general, until it has in modern Greek become universal. The language cannot have been far from the latter state at the time when the grammarians thought it necessary to have lists of words and introduced 684 their artificial rules<sup>1</sup> to teach the correct use of the spiritus, a movement in which Herodian notoriously took the lead. The destinies of the spiritus asper in Greek therefore, in spite of the completely different origin of the two elements, do not differ essentially from those of the *h* in Latin and the Romance languages. We find here, however, a phenomenon, which is instructive for Greek as well. Not only does the

<sup>1</sup> This system of the old grammarians is discussed from the standpoint of Lobeck's school, by Aug. Lentz 'Pneumatologiae elementa,' 'Philologus' erster Supplementband p. 641-776.

aspirate become volatile and disappear pretty early from its original place: *eredes* ('C. I. L.' No. 1034) cp. above No. 189, but it makes its way to positions to which it has no right at all. Hence Catullus's ridicule of *hinsidia* and the like [Carm. lxxxiv.: cp. Quinet. 'Inst.' i. 5]; and such mistakes led gradually to such erroneous forms as the ill attested *humerus* for *umerus* (No. 487), *humor* for *umor* (No. 158). Cp. Fleckeisen '50 Artikel' p. 31. The same thing has happened in the Romance languages, where the rejection of the *h*, in actual speech at least, has become the rule, while the prefixing of an irrational *h*, whether it be in actual speech, or in a way of writing that points to an older pronunciation, is by no means rare (Diez 'Grammatik' i. 370, 452): Span. *hedrar* = *iterare*, Fr. *haut* = *altus*. Attention may be directed in this respect to the numeral eight, which shows, not only in the Fr. *huit*, to which we shall return at p. 688, but also in the modern Persian *hest*, and in the Heraclidean *ἑκτώ* (Ahrens 'Dor.' 36) an aspirate of late introduction. In Irish too we meet an *h* before initial vowels that has no right to be there, and was only subjected to rules at a later time (Windisch 'Irish Grammar' E. T. § 107). We meet with the same phenomenon in vulgar English and in some parts of Germany, where aspiration has become confused. It seems then to be a law of language that when aspiration begins to lose ground it makes its way occasionally to the wrong place. And this is important for the treatment of the Greek spiritus. If the asper began early to retire from the language, and if this fact is completely established, we shall not need in each single instance to seek for some etymological ground for the change, but must simply regard the phenomenon on the whole as a confusion. From such injuries as these no language is quite secure. We must accordingly recognize them as such, and distinguish them from regular phonetic formation.

698 We will now consider the cases in which

(1) the spiritus lenis takes the place of the asper.

Comparisons of undoubted correctness establish the origin of the lenis from the asper in a not inconsiderable number of stems. We find now and then individual forms retaining the



asper side by side with the lenis. Let us take first those cases in which the spiritus asper represents an original *s*, which here and there actually occurs in by-forms by the side of the asper and the lenis, so as to bring all the three successive steps in the history of the sound clearly before our eyes.

To this class belong the copulative *á-* (No. 598), by the side of which the form *á-* (*á-θρόο-s*, *á-πας*) survives, along with the related *ó-*, both going back to the Skt. *sa*, *sam*, 'with'; *άλέα* 'the sun's warmth' (Att. *άλέα*), which has been discussed at p. 552 in its relation to *είλη*, *έλ-άνη*, and the rt. *var*; *άμός*, *άμόθεν* by the side of the better preserved *άμός*, *άμόθεν* (No. 600).—Bugge ('Bezzenb. Beitr.' iii. 120) shows that *άτερ* and *άτάρ* also get their spiritus lenis from an original spiritus asper, *άτερ* corresponding to the Germ. *sonder* ('separate'), *άτάρ* to *sondern* ('but'), so too the Skt. *sanítús* or *sanitúr* 'beyond,' 'without,' *sanutár* 'away' (cp. *άνευ* 'Pet. Dict.'). The nasal is wanting in the Gk. form as in *έκατόν* etc. It is remarkable that we thus get two synonymous sts. *sa*, one of which (Gk. *ά*, *ά*, *ó*) means 'with' and the other (Gk. *ά*) 'without.'—*ά-ω* 'satisfy' by the side of *ά-δην*, and *άδδην* (cp. p. 649) from the root preserved in the Lat. *sa-tur*, *sa-tis*, OIr. *sáith* ('satiety'), and the Goth. *sath-s* 'full,' to which Pott ii<sup>2</sup>. 853 adds also the ChSl. *sy-tŭ*, Lith. *só-tu-s* 'full.'—*έδαφος* 'bottom,' 'soil' cannot be separated from *οὔδας*, which likewise has the lenis, but was assigned at No. 281 to the rt. *έδ* = Skt. *sad* 'go' (*όδ-ό-s*). Whether the lenis is due to the effect of the following aspirate, as seems to be the case in *έδ-ε-θλο-ν* 'seat' by the side of *έδος* (No. 280), is rendered doubtful by *οὔδας* and by *όδός*, *οὔδός* 'threshold.' No satisfactory explanation of the *ou* in these words has yet been given. There are no clear traces of a rt. *vad* (Lat. *vādere*), suggested by Hugo Weber ('Ztschr. f. Gymn.' 1864 p. 518, cp. above p. 473).—That *είρω* = *sero* comes from the rt. *sar*, the sibilant of which is preserved in *σειρά*, and appears in the form of the spiritus asper in *όρμος*, has been established at No. 518.—*Έρινύ-s* in its relation to the Skt. *Saranjū-s* was discussed at No. 495, *έτεός* = *satjā-s* along with *ένυμο-s* at No. 208. The loss of the sibilant clearly took place long before Homer's time, as is shown e.g. by his

*ἄ-λοχο-ς*, which no one doubts was derived from *ἄ*, *sa* and the rt. *λεχ* (No. 173). The reduplicated *ἐτ-ήτυμο-ς* finds in *εἶρερος* (at No. 518) a complete analogy. — *ικ-μά-ς* has been referred at No. 24b to a rt. *sik*, to which, as is shown by Clemm 'Studien' ii. 45, *ιχώρ* 'juice, the blood of gods,' also belongs. — Whether *ὀπό-ς* 'juice' belongs to the words *σαφής*, *σοφός*, and the Lat. *sap-or* discussed on p. 512 is uncertain. At p. 551 on No. 662 we discussed the Ionic *οὔλο-ς* by the side of *ὄλο-ς* = Skt. *sárva-s*, Old-Lat. *sollu-s*, and on No. 506 *ὀρό-ς* by the side of the Lat. *serum*. — In the reduplicated forms too where the stem begins with *σ*, the spiritus asper appears only in a few isolated traces (*ἀφέσταλκα* Giese 'Aeol. D.' 405, 686 Keil 'Schedae epigraphicae' 10); elsewhere, e. g. in *ἐσταλκα*, *ἐσπαρται*, the lenis appears.

We may here consider the cases in which the original *sv* has left behind it only the lenis in the place of the asper which we should expect to find by the side of *f*. So the Hom. *ἄσμενος*, *ῆθος* by the side of *ῆδομαι*, *ῆδονή*, *ἀνδάνω* No. 252, *ἔθος*, *ῆθος*, rt. *έθ* for *σφεθ* No. 305, where we may discern (Christ 135) in the aspirate in the second syllable the reason for the abandonment of the asper in the first, just as we thought we could in *ῆθ-ω* 'sift' = *σήθω* (No. 571), *ιδ-ί-ω* No. 283 by the side of *ιδρός*, *ιδρώ-ς* from the rt. *svíd*, *ἴδιο-ς* No. 601 by the side of the st. *έ*, *σφε*. — *ἔτης* 'relation,' 'townsman,' had the digamma in Homer (Knös 221), and is written with the digamma in the Elie inscription 'C. I.' No. 11. Since the word, as is conjectured by Benfey ii. 202, belongs to the pronominal st. *έ* (No. 601), the latter bears to *ἔτη-ς* the same relation that *ἴστωρ* does to the rt. *Fiδ*. On this word we can now refer to Ludwig Lange's thorough investigation 'De ephetarum Atheniensium nomine' Leipz. 1874, especially p. 11 ff. In meaning *ἔταρος*, *ἐταῖρος* correspond, but the fact that no trace of a *f* is to be found in these words makes against their relationship. Bezzenberger 'Beitr.' iv. 328 is for referring *ἔταρος*, to which *ἐταῖρος* bears the same relation as *λοισθιος* to *λοισθος*, to the rt. *sak* (*sequi*, *ἔπομαι*), its *k* being for no visible reason here represented in the same dialect sometimes by *π*, sometimes by *τ*. I cannot believe this. If the Attic address *ὦ τᾶν* (also *ὦ τᾶν*) has anything to



do with *ἔτης*, Lange's theory that \**étân* is an expansion of the st. *Feta* like *μεγιστάν* from *μέγιστος* is the most probable one.

A simple *F* passes, as Kuhn shows 'Ztschr.' ii. 132 (cp. Christ p. 185 f.), in the majority of the cases belonging here, into the spiritus lenis. There is however a certain amount of probability, that in all cases the asper formed a stage in the transition. It is not surprising therefore to find that this stage has often been preserved, and indeed that sometimes this is the only form found, as in the case of *ἔσπερο-s* = *vesper* (No. 566), *ἐκ-ών* (No. 19), *ἐστία* (No. 610), while sometimes usage varies between the two breathings. So we find by the side of *ἐν-νυμι*, *εἶμα* (No. 565)—perhaps on account of the *θ* in the following syllable—*ἔσθος*, *ἐσ-θή-(τ)-s* from the rt. *Fec*, and by the side of *ἰδεῖν* and all the related words (No. 282), the remarkable isolated *ἴστωρ*, as to the aspirate of which the ancients were very doubtful (Lentz *op. cit.* p. 700), and the originally Ionic *ἱστορία*, *ἱστορεῖν*.

We have seen on the other hand that the regular representatives of a *j* are *ζ* and the spiritus asper. But in dialectic forms we meet with the lenis too in the same position. This is the case with *ἄγεα τεμένη*, *ἀγέεσσι τεμένεσι* (Hesych. ed. 687 M. Schmidt), words which undoubtedly belong to the rt. *ǵr* = Indo-Germ. *jag* (No. 118), and also with the Aeol. *ῥῦμες* by the side of the ordinary Greek *ῥμέις* (No. 607), and in *ῥτι* in Sappho (Ahr. 26) from the pronominal st. *ǵ* = Skt. *ja* (No. 606), with which may be classed the old particle *ῥφρα*, whose correlative *τόφρα* leaves no doubt as to the origin of the *ǵ* from *ǵ*. Here, as in one or two cases discussed above, the aspirate seems to have been prejudicial to the asper. As regards the second component of the particle, perhaps Thiersch 'Gr.' § 316, 14 was near the right explanation of it in taking *ῥφ-ρα* to be compounded with *ῥα* = *ǵρα*. Anyhow *γάρ* and *τάρ*, which was regarded by the old grammarians as a single word, are without question compounded with *ǵρα*. Only we have no right to regard the *φ* as a 'hardening' of the spiritus asper. Perhaps *ῥφ-ρα* is for *ῥφι-ρα* like the Homeric *τί-πτε* for *τί ποτε*. *ῥφι* would be an old form with the suffix *-φι*, like *θεό-φιν*, *νόσ-φι*, *ἰ-φι*, and the Lat. *i-bi*, *u-bi*<sup>1</sup>.

<sup>1</sup> This explanation is opposed by Lange 'Ztschr. f. ö. G.' 1863 p.

We shall return at p. 709 to  $\delta\psi\sigma\text{-}\nu$  in its relation to  $\epsilon\psi\omega$ .

We now come to the opposite case—that of

(2) the spiritus *asper* where we should expect the *lenis*.

The old grammarians describe the Attics as *δασυντικοί*. The frequent occurrence of the asper in this dialect in cases where all others have a lenis, has been discussed with much insight by Giese 'Aeol. D.' 304 ff. and elucidated especially by Keil in his 'Schedae epigraphicae' p. 6 ff. by an abundance of matter, drawn for the most part from inscriptions. Among the examples given are some where the spiritus asper has the support of old tradition, especially<sup>1</sup>, taken alphabetically,  $\epsilon\lambda\pi\text{-}\iota\text{-}\varsigma$ , where the *F* is established (No. 333),  $\epsilon\nu\eta$  ( $\sigma$  No. 428) 688  $\epsilon\chi\omega$  ( $\sigma$  No. 170),  $\iota\lambda\iota\sigma\sigma\acute{o}\varsigma$  (*F* rt.  $\phi\epsilon\lambda$ ,  $\epsilon\lambda\iota\gamma\acute{\xi}$  No. 527, cp.  $\delta\lambda\text{-}\mu\sigma\text{-}\varsigma$ ,  $\epsilon\lambda\lambda\omega$ ,  $\epsilon\lambda\kappa\acute{\upsilon}\omega$ ),  $\iota\sigma\sigma\acute{o}\varsigma$  and  $\epsilon\phi'$   $\iota\sigma\eta\varsigma$  καὶ  $\acute{o}\mu\acute{o}\iota\alpha\varsigma$ ,  $\epsilon\phi'$   $\iota\sigma\eta$  (*F* No. 569), and of examples from other dialects, there is the above-mentioned  $\epsilon\text{-}\sigma\tau\alpha\lambda\kappa\alpha$  and also the common  $\epsilon\tau\omicron\varsigma$  with καθ'  $\epsilon\tau\omicron\varsigma$  (so too the ModGk.  $\epsilon\phi'$   $\epsilon\tau\omicron\varsigma$  'in this year'),  $\delta\omega\delta\epsilon\chi\acute{\epsilon}\tau\eta\varsigma$ ,  $\epsilon\nu\epsilon\alpha\kappa\alpha\iota\delta\epsilon\chi\epsilon\tau\acute{\iota}\varsigma$  Inscr. Halicarn. in Wescher 'Revue Archéolog.' 1864 p. 135,  $\pi\epsilon\nu\tau\alpha\acute{\epsilon}\tau\eta\rho\acute{\iota}\delta\alpha$  (by the side of  $\phi\acute{\epsilon}\tau\omicron\varsigma$  cp. No. 210) 'Tab. Heracl.' i. 57,  $\iota\delta\iota\omicron\varsigma$ , καθ'  $\iota\delta\acute{\iota}\alpha\nu$  Keil 'Inscript. Thessalicae tres' p. 10 (*F* No. 601). — On the other hand there can be no doubt in other cases that the spiritus asper has crept in irregularly, in the Locrian *HAGEN* (No. 117),  $\acute{\alpha}\kappa\omicron\upsilon\sigma\iota\omicron\varsigma$  ( $\acute{\alpha}\nu$  priv.),  $\acute{\alpha}\lambda\acute{\omega}\pi\eta\acute{\xi}$  (No. 525), and likewise in the non-Attic  $\acute{\alpha}\kappa\rho\acute{o}\varsigma$  'Tab. Heracl.' i. 65, Wachsmuth 'Rhein. Mus.' xviii. 539 (No. 2),

302 and Hugo Weber 'Ztschr. f. Gymn.' 1864 p. 128. Both find an objection in the meaning. But the Lat. *dum* too tallies with *tum*, although the latter denotes point of time, the former duration, and the apparently superfluous  $\acute{\alpha}\rho\alpha$  becomes less surprising, if we consider that  $\delta\phi\alpha$  and  $\tau\acute{o}\phi\alpha$  are almost peculiar to epic diction, in which  $\acute{\alpha}\rho\alpha$  is readily annexed to words, and has but little force. Lange conjectures that  $\text{-}\phi\alpha$  comes from  $\pi\acute{\alpha}\rho\alpha$ , and thus we should get the very suitable meaning  $\pi\alpha\rho'$   $\delta$ . But where can we find another instance in Greek of a preposition placed after its case and coalescing with it so as to form one word?

<sup>1</sup> Cauer 'Stud.' viii. 235 ff. has shown that in the Attic inscription given at 'C. I. A.' i. 324 there occur some very strange forms and great inconsistencies. For this reason I have here omitted the irregular breathings that are attested only by this inscription.



ἐννέα 'Tab. Heracl.' i. 36 etc. (No. 427), εἶδον = ἐ-ῖδ-ο-ν, ὀκτώ 'Tab. Heracl.' i. 48. — If we now pass from these examples of the sporadic appearance of the spiritus asper to those of the occurrence of the asper in ordinary Greek where we should expect the lenis, the question arises, are we in each single case to seek for a special ground for it, or to content ourselves instead with the recognition of the existence in general of a certain confusion? Our desire to find fixed laws in language wherever we can, inclines us to the former course. But what do we gain, here or in other like cases, when from a large number of instances we undertake to explain here and there one, and that with difficulty, and find a number of cases left, for which our explanation will not hold good, and in which we have after all to recognize an aberration of the linguistic sense? And such is necessarily the case here. The asper has above all regularly introduced itself before every initial *ν*. But who can give any other reason e.g. in ὕδωρ (No. 300), ὑπό (No. 393), ὑπέρ (No. 392), ὑστερο-ς (No. 251 b), for the aspirate, which the related languages proved to have been wanting to the original initial, than the fact that the vowel *υ* liked the asper? Just this vowel and no other took it: the old *ου* of the Boeotians had the lenis: οὔδωρ (Ahrens 'Aeol.' 169), hence the Locrian ὑδρία (Allen 'Stud.' iii. 257)<sup>1</sup>. The case is the same with ἡγεῖσθαι (cp. Lacon. 'Αγῆστρατος, Theb. 'Αγῆσανδρος Beermann 'Stud.' ix. 49), which no one thinks of separating from ἄγειν (No. 117)—by the side of which we get the very rare ἄγειν mentioned above—especially as the derived verb now and then itself shows the lenis: 'Αγῆσανδρος, 'Αγῆσίλαος, 'Αγῆσίπολις, ἀγήτωρ, Att. 'Αγῆσίας (Lentz p. 692). Of ἄπτω in its relation to ἀπήνη, ἡπήτρια we treated on p. 510. It is true that in a certain number of cases of this sort Kuhn ('Ztschr.' ii. 260) and after him Christ (109), and similarly Savelsberg 'Ztschr.' vii. 380, have sought to prove that this spiritus asper at the beginning of the word springs from a

<sup>1</sup> The work of Süpfle 'De l'h initiale dans la langue d'oïl' Gotha 1867 contains an interesting collection of matter on the subject of aspiration before certain groups of sounds. The *h* of the Fr. *huile*, *huit*, of the Span. *huebra* (*opera*), *huevo* (*ovum*), discussed by Diez i. 370, forcibly reminds us of the Greek spiritus asper before *υ*.

spirant which has been displaced from the middle. So ἡμεῖς (Aeol. ἄμμες) = Skt. *as-mát*, ἦ-μαι from the rt. *ās* (No. 568), εὔ-ω from εὖσ-ω (No. 610), ἱ-μερο-ς from ἰσ-μερο-ς (No. 617), ἱερό-ς from ἰsara-ς (No. 614). Kuhn holds that the sibilant first changed to *h* and then went from the middle of the word to the beginning. He accordingly assumes not only forms like εὐώ, ἱέρος, which at all events find counterparts in Laconian interaspirated forms, but even ἀήμες, ἡήμαι, to which there is nothing analogous anywhere. It is extremely improbable that the Greek spiritus asper ever had a place before any consonant but *ρ*<sup>1</sup>. Then there are other difficulties besides. In the Dor. ἄμές, and in the Attic ἡμεῖς the vowel owes its length, as is shown by the Aeol. ἄμμες, to the dropping out of the *σ*. On their showing this loss has had effect twice over, once at the place where the letter stood at first, and again at the beginning of the word to which it has been transported. Further, what explanation is to be given of ἦσται, ἦστο, where the *σ* occurs *as well as* the initial spiritus asper, which was supposed to owe its existence to the transformation and displacement of the *σ*? Kuhn (275) takes refuge in the 'analogy of the other forms.' But the third person is certainly more frequent than the first, the singular and plural of which along with the third pl. alone come in for consideration. Besides εὔω (No. 610), a by-form of εὖω, the form εὔστρο also has the asper. There is no difference of initial between αὐστηρός and αὐαλέος. And how is it that we do not find εἰμί too, for the *σ* was dropped just in the same way? No one surely will appeal to the entirely isolated εἰμί which does occur in a Theraic inscription (Keil p. 10). In no case then can there be said to be a law of the kind mentioned above: it is at most only a phonetic tendency confined to a small circle of words. On the unsuccessful attempts to explain the spiritus asper in εἴμαρται I may refer to my 'Greek Verb' p. 361 and above p. 331. That the asper of the Boeot. ἰών = ἐγών (Apollon. 'De pron.' 51 Schneider)—a word which is moreover found with the lenis as well (Ahrens 206, cp. Ital. *io*)—has

<sup>1</sup> The extraordinary ΜΗΕΙΣΙΟΣ = Μίξιος (gen. of the proper name Μίξιος) on the Corcyraean inscription treated of by Bergmann 'Hermes' ii. 136 is entirely isolated.



anything to do with the expulsion of the *F* or with the *h* in the Skt. *ahám*, is the less credible from the fact that the comparison of the Goth. *ik* decides in favour of *g* as the original letter, whence it results that no aspirated sound or *h* existed in the word from the beginning. I prefer in all these cases to admit for Greek the existence of an aberration which can be explained from the history of the language on the analogy of that above shown to exist in Latin and the Romance languages. Disturbances of phonetic laws declare themselves mostly by dialectic deviation. This is the case with the phenomenon we are now discussing. We often find that some dialect shows the lenis, especially the Aeolic of Asia, though it has not entirely lost the asper: ἄμμες, Homeric ἄμμε, Aeol. ἀγήσαιτο, ἄρμα (No. 488), Ἀρμοξίδαμος (Ahr. 'Aeol.' 29), ἱππιος, Tarentine Ἰκκος, Sicilian ἱπνή· ἐφιππίς by the side of Γλαύκιππος, Δέρκιππος, Λεύκιππος (cp. p. 462), Elic ἐπίαρος (Ahr. 'Aeol.' 226). Sometimes it is only the Attic, a dialect readily inclined, as we have seen, to the aspirate, that has it: e. g. in ἑώς<sup>1</sup> = Ep. ἧώς, Dor. δώς, Lesbian Aeol. αὔως (No. 613). In ἥλιος (by the side of ἀπηλιώτης, ἀπήλιος cp. Lobeck 'Ad Ajacem' ed. ii. p. 356) = Ep. ἡέλιος, Cret. ἀβέλιος, Dor. ἀέλιος (No. 612) the Attic is supported by the agreement of the New-Ionic, but etymology establishes the priority of the lenis. In the two last-named words the dialectic forms prove that of the original stem-syllable αὔσ (cp. *aur-or-a*, i. e. *aus-os-a*) first the σ disappeared, and then the υ which is the softened *F*. Hence there can be no question here of transposition of the σ. By the side of ὄρφος, ὄρβος, Ion. οὔρος (discussed on p. 586) and the form ὄρος (ἄντορος) which repeatedly occurs on the Heracl. tables, Attic has ὄρο-ς ('boundary') as the established form, perhaps to distinguish it from ὄρ-ος ('mountain.') For if we are to look for grounds for the confusion between the breathings, it seems to me that in the case of a phenomenon of such

<sup>1</sup> Ascoli 'Krit. Stud.' 315 has pronounced Christ's conjecture ('Lautl.' 239) that ἑώς comes from a primary \**vasas* to be 'convincing.' In that case all the other forms would have to be referred to another primary form. We should have expected \**εὔως* like *εὔχομαι* (cp. p. 702). But in Lesb. it is αὔως, in Dor. δώς, so that we can certainly deduce the existence of ἄφος.

comparatively late appearance in language, the grounds must be of a much more special character. I do not think it impossible that *ἡμεῖς* should have owed its asper to the analogy of *ὕμεῖς*; and so *ἡμῖαι* might be influenced by *ἔξομαι* (No. 280), especially by means of the aor. *ἔισα*. *ἀμαρτεῖν* (cp. 'Gk. Verb' p. 281)—Homeric *ἡμβροτον*, *ἀβροτάζω*—whose meaning almost compels us to go for its origin to the privative *ἀν* and the rt. *μερ* (No. 467), not, as Benary 'Ztschr.' iv. 49 takes it, to No. 466, perhaps sounded like *ἄμα*, *ἴστωρ* by the side of *ἰδεῖν* perhaps like *ἴστημι*, *ἰστός*. The Heracleean *ὀκτώ*, to which we may now add *χῶγδοον* found on a comparatively late inser. from Dyme in Achaia, and *έννέα* perhaps followed *ἐπτά*. *ἄγιος*, *ἄγος* (No. 118) drew after itself some forms belonging to *ἄγος* (No. 116). It is conceivable that the particle *ἔως* is to blame for the aspirate in *ἑός*, just as many Germans say *Augenbraunen* for *Augenbrauen* ('eyebrows'), and as other relationships and parallels are discovered by 'popular' etymology<sup>1</sup>.

#### F. Groups of Consonants.

In the course of these investigations attention has been repeatedly called to the fact that groups of sounds are subject to other laws than those which hold for individual sounds. This is seen nowhere more clearly than in the case of diphthongs. Their manifold transformations, e. g. in Latin, for which we need only refer to Corssen's thorough treatment of the question, are subject to laws quite different from those of the affections of the individual vowels. Consider only the history of the diphthongs *ai*, *oi* which are so constantly weakened not only to *ae*, *oe* but even to *i*, *u*, though we see not the remotest trace of similar weakenings in the case of the individual vowels *a* and *o*. For instance, the old *ā*, in the nom. sing. at most goes no farther than *ǣ*, while in the dat. and abl. plur. it disappeared in time altogether (*ala*, *alīs*). Groups of consonants, especially at the beginning of a word, which is etymologically the most important part, give the

<sup>1</sup> [See above p. 438, and cp. Sayce 'Principles of Comparative Philology' p. 376-8.]



vocal organs most trouble. The inclination to make these groups easier, to render their several elements mutually more accommodating, and even to drop one or more of them out, is therefore one which needs little explanation, especially as a small loss or change here leaves the effect on the ear essentially the same, and consequently the change entails far less danger than in the case of simple sounds to the interests of distinctness, the preservation of which is a principle which must take an important rank by the side of the proneness to 'weathering away' which has been noticed in the life of language. To the fact that the Greek aspirates are in a sense groups of sounds we have already appealed as ground for the supposition of similar peculiarities in the case of these sounds.

Pott ii<sup>1</sup>. 297 and Leo Meyer i. 183 ff. have made many comparisons of initial groups of consonants. Max Müller 'Lect.' ii. 169 gives some remarkable instances of defaced groups of 692 sounds from different languages. We here confine ourselves to such movements of sound as are distinctly to be seen, and shall be more than usually careful to exclude doubtful instances. Some cases have been already noticed at p. 429 ff.

To begin with, we will take the simplest case of defacement, that of the loss of a consonant.

#### 1. LOSS OF A CONSONANT.

Since Greek shows no disinclination to the harsh combinations made by  $\kappa$ ,  $\pi$ ,  $\chi$ ,  $\phi$ ,  $\gamma$ ,  $\beta$  with a following dental of the same order, it is with the groups beginning with the sibilant that we shall here be specially concerned. On the whole these groups too are faithfully preserved, and in this respect all we need do is to point to words and roots like  $\sigma\kappa\alpha\iota\acute{o}\text{-s}$  (No. 105) = Lat. *scaevu-s*,  $\sigma\kappa\acute{\eta}\pi\text{-}\tau\text{-}\omega$  (No. 108),  $\sigma\kappa\acute{\alpha}\pi\tau\omega$  (No. 109) by the side of the Lith. *kápa-s*, *σκιά* (No. 112), rt. *спа* (No. 216), *сρεμφ* (No. 219), *сπг* (No. 226) by the side of the Skt. *tiḡ*, *σπλήν* (No. 390) by the side of the Skt. *plīhán*. On the other hand we find sporadic instances of a twofold lightening of such groups, either by the loss of the sibilant, or by the expulsion of a following sound. We will first discuss the former, by far the more frequent of the two.

## (a) Loss of a Sibilant.

This has become the rule in the case of  $\sigma\rho$  and  $\sigma\nu$ , which are combinations not allowed in Greek. Thus the Gk. rt.  $\rho\nu$  (No. 517) corresponds to the Skt. *sru*, Lith. *srav-jù*. The Latin representatives of this root discussed at p. 352 probably point to the fact that the loss of the initial *s* belongs to the Graeco-Italic period. In the middle of the word, to judge from forms like  $\epsilon\rho\rho\epsilon\epsilon\nu$  from  $\epsilon\text{-}\sigma\rho\epsilon\text{-}\epsilon\text{-}\nu$  (Skt. *á-srav-a-t*), the *sr* seems to have been preserved longer intact. — So too for  $\nu\acute{\alpha}\omega$  and  $\nu\acute{\epsilon}\omega$  (No. 443) we gave the rts. *sna* and *snu*, whose initial was to some extent left untouched in Skt. and Zend, in Umbrian, Teutonic, Lithuanian, and Irish, and we traced  $\nu\nu\acute{o}\text{-}\varsigma$  (No. 444) to  $\sigma\nu\nu\sigma\sigma\text{-}\varsigma$ . The Lat. *nuru-s* here shares the loss of the *s*, and the same applies to the rt.  $\nu\iota\phi$  (No. 440),  $\nu\acute{\iota}\phi\epsilon\iota$  by the side of the Lat. *ning-it* and the OHG. *snîwit*, Lith. *snìgti*, and to the rt.  $\nu\epsilon\phi$ , from which come  $\nu\epsilon\upsilon\rho\sigma\text{-}\nu$  and *nervu-s* (No. 434) by the side of the OHG. *snar-a*.

A  $\sigma\mu$  occurs tolerably often in Greek:  $\sigma\acute{\mu}\acute{\alpha}\omega$  (Pott W. i. 388),  $\sigma\mu\eta\nu\sigma$ ,  $\sigma\mu\epsilon\rho\delta\alpha\lambda\acute{\epsilon}\sigma$ . At all events in the latter of these words the  $\sigma\mu$  is original, if with Ebel ('Ztschr.' vii. 227), and Corssen ('Beitr.' 430) we refer this word and the related  $\sigma\mu\epsilon\rho\delta\nu\acute{o}\text{-}\varsigma$  to a rt. *smard*, a root which has lost its *s* in the Skt. *mard* =  
 693 Lat. *mord-ere* (No. 457), though it has faithfully preserved it in the OHG. *smêrz-an*. It is true the meaning of the Gk. words is somewhat more remote. But a comparison of the English *smart* makes the transition from 'biting' to 'hurting' and 'alarming' seem not impossible<sup>1</sup>. — In certain dialects by-forms in  $\zeta\mu$  seem to have subsisted, if we may trust Eustathius p. 217, p. 1421, who calls the  $\zeta$  in this connexion at one time Achæan, at another Attic. Still we find on inscriptions a weakening of  $\sigma$  to the sibilant sound given to  $\zeta$  by the later Greeks, at all events in the proper name  $\text{Ζ}\mu\acute{\upsilon}\rho\nu\eta$  and in the Delphian form  $\kappa\alpha\tau\alpha\delta\omicron\nu\lambda\iota\zeta\mu\tilde{\omega}$  (Wescher-Foucart No. 433, 13 p. 312). The double  $\mu$  in  $\phi\iota\lambda\omicron\mu\mu\epsilon\iota\delta\text{-}\acute{\eta}\varsigma$  by the side of  $\mu\epsilon\iota\delta\acute{\iota}\acute{\alpha}\omega$  (No. 463) preserves a trace of the rt. *smi*. From a weakening like this to the complete rejection of the letter

<sup>1</sup> We have a remote connexion perhaps in  $\sigma\mu\alpha\rho\text{-}\kappa\acute{o}\text{-}\nu$ , interpreted in Hesych. by  $\kappa\alpha\theta\alpha\rho\acute{o}\nu$  (?),  $\beta\rho\omega\tau\acute{\iota}\kappa\acute{o}\nu$ ,  $\delta\rho\iota\mu\acute{\upsilon}$ .



was but a short step<sup>1</sup>. This step has been taken in the case of μέλδ-ω (No. 287), μάρ-το-s, μέρ-μερ-α, μέρ-ι-μνα (No. 466), and μύδ-ος (No. 479), where only the related languages have retained the *s*. μικρό-s is to be found from Homer onwards by the side of σμικρό-s. Fick i<sup>3</sup>. 835 compares the word with the OHG. *smālr* 'littleness,' 'insult,' and the Lat. *mac-er*, Joh. Schmidt with the Lat. *mic-a*, *mic-ula*, 'crumb,' *mīcidus* 'tiny' ('Voc.' i. 108). — σμυκτήρ· ὁ μυκτήρ, and σμύσ-σεται· ἀπομύσσεται Hesych. are peculiar. For the related languages only know of forms with no initial σ (No. 92).

About the following words we can be certain, — thanks especially to Lobeck 'Elem.' i. 125, — that a σκ has been lightened to a simple κ. His 'Dissertatio de prothesi et aphaeresi' discusses minutely and exhaustively, from a specifically Greek point of view, the other groups of consonants found at the beginning of words. — Just as, in the case of σμ, ζμ served as a transition to the simple μ, so we can appeal to the license of Homeric prosody, which left a vowel short before Σκάμανδρος (Υ 74 etc.) and σκέπαρνον (ι 391, ε 237) as showing an intermediate step between σκ and κ. The necessities of the metre produced the same result here, at all events as far as the ear went, which was produced in the other case on both ear and eye alike by the inclination to ease in pronunciation. Lobeck points out that the same relation exists in Homer and Hesiod between κίδνασθαι and σκίδνασθαι (ὑπεῖρ ἄλλα κίδναιται 'Hώς Ψ 227 — but Π 375 σκίδναθ' ὑπὸ νεφέων) as between κεδασθέντες (B 398) and σκέδασεν (P 649). The σκ (Nos. 294, 295) is evidently primitive. So we get side by side σκάπετο-s and κάπετο-s 'ditch' (Hesych.) while the verb σκάπτειν preserves the fuller initial, which, as has been shown under No. 109, must be regarded as the older. The Letto-Slavonic family shows the same aphaeresis. καφά· λουτήρ (i.e. 'bathing tub') λάκωνες Hesych. clearly belongs to σκάφος 'ship,' 'hollow' and σκαφίς 'tub.' The name for the fox, attributed to this root at No. 109, is sometimes σκαφώρη and sometimes καφώρη. — Hesychius gives us καρθμοί· κινήσεις, Cyrillus (M. Schmidt on Hesych.) καρθμός· ὁ ποῦς, words which we

<sup>1</sup> Cp. the different treatment of σμ in the middle of a word discussed above on p. 433.

agree with Lobeck in thinking related to *σκαίρειν* 'hop.' To the same root in the sense 'start,' 'quiver' probably belongs *κεραυνό-ς* and the Lat. *coru-scu-s*. For the latter we get the by-form *scoru-scu-s* (Loewe 'Prodr.' 355). Cp. Brugman 'Stud.' viii. 315, Van. 1246. — *σκάριφος* (p. 533) and the commoner *κάρφος* 'twig,' 'splinter' are no doubt one and the same word; we can be all the more certain of this, because we find a connecting link between them in the dim. *σκαρφίον* and the verb *σκαρφά-ω* 'splinter' (Lobeck 'Prolegg.' 294). — *κίμψαντες* *ἐρείσαντες* (Hes.) is to be referred to the root with the fuller initial which we get in *σκίπων*, *σκίμπτειν*, and is discussed at No. 108. — A kind of ant is called *σκνίψ* (st. *σκνῖπ* and *σκνῖφ*) and *κνίψ*, — also *σκίψ* Lob. 'Paralipp.' 114. Cp. Pott W. i. 678, where the ChSl. *sknīpa* 'culex' is compared. — On the relation of the rt. *κοf* to *θυο-σκόος* and the forms of the related languages we need only refer to No. 64; with reference to *σκῦτος* and *κύτος* to No. 113, to which must be added the derived form *σκυτάλη*, and the by-form *κουτάλη* quoted by Lobeck 126, and said to be Doric. — For the root of *κείρω*, *κόλο-ς*, *κολούω* we found at No. 53 that the primary form was *skar*. Besides these I may call attention to No. 45 b *κείω*, No. 59 *κληῖ-ς*, No. 686 *κόπτω*, No. 76 *κρίνω*.

A *σπ* has been weakened to *π* in the following instances: rt. *πεν* (No. 354) by the side of *σπα*, *σπάνις*, *πί-νο-ς* 'dirt' (No. 365) by the side of *σπί-λο-ς* 'spot' and the OBohem. *spi-na*. — There is no clear etymology which will account for the relation between *σπέλεθος* ('Ελληνικῶς) and *πέλεθος* ('Αττικῶς) and *σπύραθος*, *πύραθος* connected with it by Lobeck on account of the meaning 'dung.' Conjectures are given by Leo Meyer i. 64, and Walter 'Ztschr.' xii. 383. The form *σπέος* however for *πέος* 'penis' is not established (No. 355). — Less probable again is Leo Meyer's view that the rt. *πικ* (No. 100) has lost a sibilant, the only proof of which is to be found in *spica*, *spiculum* and *spina*; and their relationship is by no means clear. Other combinations for these words are given by Corssen i<sup>2</sup>. 538. — Before *φ* the Laconians dropped the *σ* in the dat. pl. of the reflexive pronoun *φίν* = *σφίν* (No. 601, Ahr. 'Dor.' 271), and in the same way the Boeotian in *Φίξ* = *Σφίγξ* by the side of *σφίγγειν* 'strangle,' but with a *κ* in the stem acc. *Φίκα* (Beer-



mann 'Stud.' ix. 60).—On the other hand at No. 558 we expressed a doubt whether the  $\sigma$  of the rt.  $\sigma\phi\alpha\lambda$  ever disappeared.

Before  $\tau$  the sibilant has certainly fallen away in the following words:  $\tau\alpha\upsilon\rho\sigma$  (No. 232) by the side of the Ved.  $sth\ddot{u}r\acute{a}$ -s, Goth.  $stiur$ ,  $\tau\acute{\epsilon}\gamma\sigma$ ,  $\tau\acute{\epsilon}\gamma\eta$  by the side of  $\sigma\tau\acute{\epsilon}\gamma\sigma$ ,  $\sigma\tau\acute{\epsilon}\gamma\eta$  (No. 155) and the Skt.  $sth\acute{a}g$ -ā-mi, where again the Lat.  $teg$ -o and the ON.  $thak$  (OHG.  $dek$ -ju) correspond with the shorter form, rt.  $\tau\upsilon\delta$  (No. 248), preserved in  $\tau\upsilon\delta$ -εύ-s, by the side of the Lat.  $tund$ -e-re and the Skt.  $tud$ , but the Goth.  $stau$ -ta (OHG.  $st\acute{o}z$ -u), rt.  $\tau\alpha\phi$  (No. 233) by the side of the Skt.  $stambh$ . The same relation is to be seen in the case of the rt.  $\tau\upsilon\pi$  (No. 249), OHG.  $stumpf$  and Skt.  $pra$ -stump-a-ti along with  $\sigma\tau\upsilon\pi\acute{\alpha}\zeta\epsilon\upsilon$ . It seemed probable that the same loss has been sustained by  $\tau\acute{\epsilon}\rho\alpha$ s (No. 205).  $\tau\acute{o}\pi$ -o-s has been connected with the Skt.  $sth\ddot{a}p$ -ājā-mi 'place,' to which it would bear the same relation as that borne by the German *Stelle* ('place') to the verb *stellen* ('to place'). The  $o$  makes this very doubtful. — We have a Latin instance of the expulsion of  $s$  before  $t$  in  $toru$ -s by the side of  $stor$ -ea (No. 227). (Cp. Corssen i<sup>2</sup>. 278.) The Skt.  $t\acute{a}l$ -p-a-s 'bed,' too, of similar meaning, is referred in the 'Pet. Dict.' to the rt.  $star$ , of which  $t\acute{a}l$ -p would have to be regarded as an expansion. With  $\tau\acute{\upsilon}\rho$ -βη (No. 250) is connected  $\sigma\tau\upsilon\rho$ -βάζειν =  $\tau\upsilon\rho$ βάζειν and perhaps the German *Sturm*-m ('storm'), and we may also mention the onomatopoetic verbs  $\tau\rho\acute{\upsilon}\zeta\epsilon\upsilon$  and  $\sigma\tau\rho\acute{\upsilon}\zeta\epsilon\upsilon$  (Lob. 'El.' i. 131), and  $\tau\rho\acute{\iota}\zeta\epsilon\upsilon$  by the side of  $\sigma\tau\rho\iota\gamma$ -μός-s. But we have no right to compare the Latin  $str\ddot{u}d$ -ē-re with the root shown by  $\tau\acute{\epsilon}$ -τρῖγ-α, as the  $d$  cannot be reconciled with the  $\gamma$ . The view that  $\tau\acute{o}\nu\sigma$  in the sense of 'tone' ought to be separated from the rt.  $\tau\epsilon\nu$  and referred to the onomatopoetic rt.  $\sigma\tau\epsilon\nu$ , *stan* has, I believe, been refuted at No. 230. On the other hand we conjectured that the rt.  $\tau\alpha\tau$  (No. 230 b) arose from *stag*.

(b) Loss of another Consonant.

That the sibilant should suppress a following consonant is *a priori* only probable in the case of the spirants, which in so many instances besides had to lose their place in the mouths of the Greeks. The digamma met with this fate in:  $\sigma\acute{\alpha}\lambda\sigma$

σάλ-η (No. 556), σέλ-ας along with Σείρ-ιο-ς from the rt. *svar* (No. 663), σιγ-ή (No. 572) by the side of the Germ. *schweigen* ('to be silent'), σίδ-ηρο-ς by the side of the Skt. *svēd-anī* 'iron pan' (No. 293), σόβ-η (No. 574) by the side of the Germ. *Schweif* ('tail'), σομφό-ς (No. 575) by the side of the Goth. *svamm-s*, probably too in σαίνειν 'wag the tail,' Hom. περι-σσαίνειν, by the side of the MHG. *swanz* ('tail') (Delbrück 'Ztschr.' xvii. 239). — But explosive sounds too are perhaps now and then expelled after the sibilant; this has happened to τ in σύρβη, σύρβα the ordinary Greek forms for the Attic  
 696 τύρβη, τύρβα, both, as we saw, probably from the rt. *styr* (No. 250), although the objection is here admissible that σ is weakened from τ like the σ in σύ by the side of τύ. There are many doubtful cases (among which I reckon συλάω by the side of σκύλο-ν No. 113) which we need not discuss<sup>1</sup>.

Even before a sibilant an explosive was suppressed under certain circumstances. Here we must place the usual form σύν, in the place of the more original ξύν, which is also replaced by *cum* and κυν (p. 544), the Boeotian and Arcadian ές for έξ, mentioned on No. 583 b, the Cypr. σοάλα = ξυήλη (M. Schmidt 'Ztschr.' ix. 367)<sup>2</sup>, and the dialectic representation of ψ by σ: σίττακος by the side of ψίττακος, though this is probably a foreign word, άσεκτο-ς = άψεκτο-ς in Rhinton

<sup>1</sup> Here may be added Delbrück's conjecture ('Ztschr.' xvii. 238), that σώμα (for σκώμα) corresponds to the OS. *hamo* 'covering,' OHG. *lih-hamo* 'corpse.' In that case the root would be that mentioned at No. 112.

<sup>2</sup> H. W. Roscher has drawn me up a list of forms in which ξ and σ are interchanged. After removing those which are etymologically obscure, and also those in which an Attic σ makes its way even in Doric into the place of the genuinely Doric ξ discussed on pp. 615 and 632 (tabb. Heracl. i. 51 ['C. I. G.' No. 5774] *κατεσωίσαμες*, ii. 30 [5775] *κατεσωίξαμες*), we are left with the following important instances besides those mentioned in the text: at the beginning of a word in Ξενοφίλου = Ξενοφίλου (in the Roman period 'C. I.' 2585), in the middle in 'Ανασικλέους (1591, 34, Boeotian), Δεσίω = Δεξιού (2598, Cretan), δεισω = δειξω (2820, Rom. period), αναδεσάμενον (3080, Rom.) Παράδοσος = Παράδοξος (Wieseler 'Jahn's Jahrb.' 1868 p. 127), at the end in πέρις = περίξ (1625, 14, 58, Boeot.). — For σ for ψ R. quotes σελλίξε-σθαι ψελλίξεσθαι Hesych.



(Ahr. 'Dor.' 99), *σώχειν* Ionic for *ψώχειν*. We may probably too assume the same intermediate step between *ψάμμος*, *ψάμαθος* and *ἄμμος*, *ἄμαθος*. It is probable indeed that the Lat. *sabulum* and the Teutonic *sand* are also related; and they show the *s* that we should expect to find. Fick's assumption (i<sup>3</sup>. 160) that the Skt. *bhas* is the root, and that by metathesis it became *psā* which also means 'bruise' (Van. 631, Brugman 'Morphol. Unters.' 18) is ingenious.

## 2. CHANGE FROM ONE ORGAN TO ANOTHER.

In words which are undoubtedly related there occurs not seldom after a sibilant a different explosive: sometimes the variation occurs within Greek itself, sometimes as between Greek and the other languages. Diez 'Gramm.' i. 266 notices the same phenomenon in the Romance languages: e.g. Ital. *fischiare* for *fistulare*, *mischio* for *mistio*. I regard alterations of this kind as occasional aberrations due to similarity of sound. So we find *σπ* for *σκ* in *σπάλαξ*, *ἀσπάλαξ* by the side of the older form *σκάλοψ*, which is shown by its etymology<sup>697</sup> (No. 106) to be the older, so too *σπάλ-α-θρο-ν* 'coal-shovel,' by the side of *σκάλ-ευθρο-ν*, *σκάλ-εθρο-ν*. Since *σκαλεύω* (cp. *σκάλλω*) is also used especially of 'poking the coals,' the etymon is undoubtedly No. 664. The Gk. *σπινθήρ* (p. 504) is confronted by the Latin dim. *scintilla*, though Fick 'Ztschr.' xxi. 2 explains it otherwise. On the other hand we find for the Gk. *σκῦλο-ν* (No. 113) the labialised *spolia* in Latin. Eustath. 'Ad Il.' 947, 13 mentions *σφαρίζω* by the side of *σκαρίζω* 'hop.' Considering the related *σκαίρω* and *σκιρτάω* the *σκ* seems to be older than the *σπ*. But we have good reason for holding the order of the sounds in the Lat. *spec-i-o* to be older than that in the rt. *σκεπ* (No. 111). *σφ* occurs in the rt. *сφαλ* as the correlative of the Skt. *sphal* (No. 558), but the latter language has also a form *skhal*.

There is a connexion between the very common *στ* and the harder *σκ* in the st. *σκαρτ* (nom. *σκάρ*) by the side of *sterc-us* and *στεργ-άνο-ς* (No. 110), where the *κ* has the Teutonic and Slavonic on its side; in *στόλοκρον* 'τὸ περιεκομμένον τὰς κόμας καὶ γεγονὸς ψιλόν,' i.e. 'cropped,' and so of

the same meaning as *σκόλ-υθρο-ς* discussed at No. 114; in *σκάφος* (No. 109) with the by-form *στάφος* preserved in Hesychius. There are also cases where *σπ* is connected with *στ*. There seemed (No. 354) to be good grounds compelling us to assign to the Dor. *σπάδιο-ν* priority over the ordinary Greek *στάδιο-ν*: we compared it, at all events as far as the root went, with the Latin *spatiu-m*. So too the Skt. *shṛīu* cannot be reckoned anything but a weakening of the rt. *spīu*, *spu* (No. 382) which appears elsewhere. It is more difficult to say what is the relation of the Aeol. *σπελ* (*σπαλείς*, *σπόλα*) to *στέλλω*, *στολή* (No. 218), but I am very much inclined to couple the Lat. *stud-e-o*, *stud-iu-m* with the almost synonymous *σπεύδ-ω*, *σπουδ-ή* (cp. Fick i<sup>3</sup>. 251) and to regard the labial as older than the dental. Kuhn 'Ztschr.' iii. 324 compares with *σπεύδ-ω* the OHG. *spuon*, *spuoan*, along with the derived OHG. *spuatōn*, AS. *spēdan*. The *δ* must in that case be secondary, and the *u* have arisen from *a*. (Cp. Corssen 'Nachtr.' 117.) — Much doubt has been thrown on the connexion of *στροῦθο-ς* (or *στρουθό-ς*) with the synonymous Goth. *sparva* 'sparrow,' since Joh. Schmidt ('Ztschr.' xxii. 316) has shown, that in the ModGk. *σπουργίτι*, to which perhaps belongs *σπέργουλος* ὀρνιθάριον ἄγριον (Hesych.), we have a name for the same creature with a *π*.

### 3. OTHER AFFECTIONS.

We here assign the first place, not without reason, to the aspiration produced by a sibilant on a following explosive.  
 698 This is one of the commonest affections, and it has been sufficiently discussed on p. 503 ff.

We met with a few cases of the softening of an initial *κ* to *γ* when joined to *ν* on p. 535. To these we may perhaps add *γδοῦπο-ς* 'noise,' which is further defaced to *δοῦπο-ς*, and can hardly be separated from the almost synonymous *κτύπο-ς*.

*κτ* corresponds in a number of clear instances to *ksh*, i.e. an older *ks* in Sanskrit (Ascoli 'Stud. Crit.' 378). Here belongs the Gk. rt. *κταν*, *κτεν*, 'kill' = Skt. *kshan*, Zd. *khsan* (No. 77 b), *κτι* 'build' = Skt. *kshi* (No. 78)<sup>1</sup>; we find the same in the

<sup>1</sup> To this root belongs also the word *KTOINA* which may now be read



middle of the word in τέκτων (No. 235) = *tákshā*, ἄρκτο-*s* (No. 8) = *íksha-s*. It is important to notice the by-forms with a simple *κ*: καίνειν, ἄρκος. To these Leo Meyer i. 193 adds κτεί-*s* st. κτεν, 'comb,' by the side of ξαίνειν 'comb,' 'scratch,' which seems to be related to ξέειν 'scrape' and the kindred words. We might add κτεδών 'tear,' 'cleft in wood' (Aristonicus on Ψ 169), if it were not that here the lengthened *rt*. κκεδ (No. 294) is the base of the word. We may moreover compare the Boeot. δκαλλο-*s* with the Skt. forms *áksh-i*, *aksh-án* (p. 464). Aufrecht ('Ztschr.' viii. 72), taking his stand on the fact that elsewhere the priority of the *t* to the *s* is firmly established, regarded the Greek form as the oldest, and conjectured that *ks* came from *kt* by the weakening of the explosive to the sibilant. Schleicher ('Compend.' 3<sup>1</sup> 167, 204), and Pott ii<sup>2</sup>. 508 followed him in this view. Pott W. ii. 2, 307 now admits that the Gk. *τ* is due to assimilation. *ks* became *kt* owing to the influence of the preceding *κ*. We saw in σπόγγο-*s* (No. 575) and σφε = *sua* (No. 601) an assimilation of a like tendency.

It is still easier to explain the occasional interchange of position between the sibilant and the explosive, inasmuch as here again it is the general impression presented by the combined sounds, in whatever order, with the preservation of which the linguistic instinct linked the meaning of the word or root. This change appears as a special dialectic peculiarity in the Aeol. σκίφος, σπέλιον, σπαλís, σδυγόν (Ahrens 'Aeol.' 699 49) instead of the ordinary Greek ξίφος, ψέλιον ('curb'), ψαλís ('shears'), ζυγόν. It is probable that in the case of ξίφος and the related ξίφη 'the iron of a plane' (Hesych.) the

several times in the inscrip. from Kamiros in Rhodes of the fourth century before Christ, published by C. T. Newton 'Trans. of the R. Soc. of Lit.' vol. xi. New Series: so quite at the beginning ἔδοξε Καμireῦσι τὰς κτοίνας τὰς Καμρέων τὰς ἐν τῇ νάσῳ καὶ τὰς ἐν τῇ ἀπείρῳ ἀναγράψαι πάσας. Clearly, as Newton has seen, Hesychius's interpretation (κτύναι ἢ κτοίνας δῆμος μεμηρισμένος) of 'community,' 'settlement,' suits this. It is a new guarantee of the excellent sources from which his lexicon is drawn. Similarly κτίσμα, κτίσις. The accentuation κτοι-νά would agree with ποι-νή, κτοι-να with θοί-νη. Also at l. 14 there is the derived κτοινά-τα-*s* (cp. δημό-τη-*s*).

Aeolic form has probably the original position of the sounds, as Fick i<sup>3</sup>. 808 well compares the ON. *skafa* f. 'scraping-iron,' OHG. *scaba* f. 'plane' (cp. ChSl. *skob-l'* 'radula'), while *ζυγό-ν* is without doubt older than the Aeolic *σδυγόν* (p. 626). There is evidence that some of these forms are Doric as well (Ahr. 'Dor.' 99), and with them we may class the Syracusan form of the reflexive pronoun—*ψέ* for the ordinary Greek *σφέ* (*ψέων*, *ψίν*, *ψέ* Ahr. 'Dor.' 261), —and *ψύττω* which at No. 382 we referred along with (*ἐπι*) *φθύσσω* to the rt. *spu*. What is the relation of Hesychius's *ἀσπίθιον* to the synonymous *ἀψίνθιον* it is hard to determine. On the other hand *σφόνδυλο-ς* 'whirl' seems to come from a rt. *spand* (No. 296), so that *ψενδύλοι* (Hesych.) is due to metathesis. With *ψεκάς* or *ψακάς* 'drop' Fick i<sup>3</sup>. 831 connects the Lith. *spaka-s* 'drop,' 'dot.' Again we find the Gk. *ἰξό-ς* 'mistletoe,' 'birdlime,' confronting the Lat. *vis-cu-s*, *vis-cu-m* (Fick ii<sup>3</sup>. 242), *ἰξύ-ς* 'flank' has been compared with the Lat. *visc-er-a* (Van. 969), the Gk. *σφήξ*, Lat. *vespa* confronting the OHG. *wefsa* (No. 580). Perhaps we have in *ψήν* 'gall-fly' which Fick i<sup>3</sup>. 160 compares with the Skt. *bhus-ana-s* 'bee' the same group preserved in a different order. *ψόα*, Ion. *ψύη* 'the reins,' seems clearly related to *ὀ-σφύ-ς* 'hip,' perhaps even to the Skt. *spṛiḥ* 'hip' (Kuhn 'Ztschr.' iii. 324). It is perhaps not so clear whether the Gk. *ξυρό-ν* is related to the synonymous Skt. *khsurá-s* 'shearing-knife,' and the unauthenticated rt. *kshur* 'cut,' 'scratch,' and the German *scheeren* (*shear*, OHG. *skeran*). On the other hand *σκούρο-ς* *λατύπη*, i.e. 'rubbish fallen from cut stones,' which Van. 1120 gives with *ξυρό-ν* can certainly not be separated from *ξύειν* 'scrape,' 'make smooth.' — The initial *ψ* still especially needs careful investigation. We have already met with this double consonant in the Syracusan *ψίν* from the st. *sva*: here the *φ* of the corresponding *σφε* had first been hardened from *f*. We saw this hardening without a transposition in *σφόγγο-ς*, *σπόγγο-ς* No. 575. Perhaps this is the way to explain the Aeol. *Ψαπφώ* = *Σαπφώ*. It seems to me probable that this name is really equivalent to *σοφή* 'docta puella,' and so belongs to *σαφής*, *σοφός-ς* (p. 512). *Ψαπφώ* would bear to *σοφή* the same relation as the nominal form *ψέ* to the Lat. *se*. By the side of the form with



$\pi\phi$  we find the simple  $\phi$  as well, and conversely by the side of  $\sigma\phi\acute{o}$ -s we have in Aristoph. 'Eccl.' 571  $\phi\acute{\iota}\lambda\acute{o}\sigma\phi\acute{o}\varsigma$  with a long penultimate (Roscher 'Stud.' i. 2, 123 f.). The same relation probably exists between  $\psi\acute{o}\lambda\omicron$ -s 'smoke,' and the German *schwelen* 'smoulder,' *schwül* 'sultry' (AS. *svelan* 700 'urere,' 'ustulare' [Eng. *sweltering*, *sultry*] Van. 1222). Joh. Schmidt ('Ztschr.' xxii. 314) regards  $\acute{\alpha}$ - $\sigma\beta\omicron\lambda\omicron$ -s 'soot' for \* $\acute{\alpha}$ - $\sigma\phi\omicron\lambda\omicron$ -s as the intermediate stage.

#### 4. SEVERAL AFFECTIONS COMBINED.

Although etymologies, which assume an excessive number of changes of the originally existing sounds, readily awaken distrust, still the difficulty of pronouncing several groups of consonants is sufficient ground for accepting the supposition of the concurrence of several distinct defacements. But it is slippery ground after all. We must exact all the more complete similarity of meaning before we are convinced of the soundness of a comparison.

For instance I have under No. 106 connected with  $\sigma\acute{\kappa}\acute{\alpha}\lambda\omicron\psi$ , transformed, as we saw on p. 696, to  $\sigma\acute{\pi}\acute{\alpha}\lambda\alpha\xi$ ,  $\acute{\alpha}\sigma\acute{\pi}\acute{\alpha}\lambda\alpha\xi$ , the Lat. *talpa*, because both words are names for the same animal, and preference for *st* rather than *sc*, *sp* is established by other analogies besides (*stud-eo*, *stercus*), while the loss of *s* before *t* finds still clearer precedents (p. 695). The *a* of *talp-a* may be compared with that of *formīc-a* by the side of  $\acute{\mu}\acute{\upsilon}\rho\mu\eta\xi$  (No. 482), and of *upūp-a* by the side of  $\acute{\epsilon}\pi\omicron\psi$  (No. 336).—Similarly I hold Leo Meyer to be right in connecting *turg-e-o* with  $\sigma\pi\alpha\rho\gamma\text{-}\acute{\alpha}\text{-}\omega$  (by-form  $\sigma\pi\alpha\rho\gamma\acute{\epsilon}\omega$ ),  $\sigma\phi\rho\iota\gamma\text{-}\acute{\alpha}\text{-}\omega$ . The meaning 'swell up,' 'be puffed up,' both in its literal and in its metaphorical sense, is common to both words. Cp. Bugge 'Ztschr.' xx. 40. Fick i<sup>3</sup>. 833 adds  $\acute{\alpha}\sigma\acute{\pi}\acute{\alpha}\rho\alpha\gamma\text{-}\omicron\text{-}\varsigma$  'asparagus' = Lith. *spurga-s*, Zd. *sparegha* 'sprout.' But cp. p. 503.

Of the possibility of loss of the sibilant supervening upon another affection we have irrefragable proof in the form  $\phi\acute{\iota}\nu$  =  $\sigma\phi\acute{\iota}\nu$  (Ahrens 'Dor.' 261) in which the Laconians show their usual love of conciseness. We claimed the same change for the Homeric  $\phi\acute{\eta}$  'as,' on p. 443. As here the sibilant disappeared after affecting the following spirant so after pro-

ducing aspiration in the case of the Lat. *fid-es* 'strings' by the side of *σφίδ-ες* (No. 297), where we can get no clear indication of the original form of the labial. Leo Meyer and Corssen i<sup>2</sup>. 179 compare *πνίγ-ω* with the Lat. *stingu-o*, which can hardly be separated from the German *er-sticken* ('stifle' No. 226) and is connected by Pott ii<sup>2</sup>. 682 with *στίγειν*. In that case it would be the exact opposite of the German *an-stecken* ('set fire to'). Leo Meyer's explanation is a possible one, supposing we regarded *spig* as the primary form, whence by nasalization *spring*, by change of organ *sting*, by loss of the *s* and 701 metathesis of the nasal *pnig* (for *ping*). But there are too many leaps here, and I still hold the conjecture given under the rt. *πνυ* (No. 370), to be more probable<sup>1</sup>.

The union of aspiration with the loss of the *s* shows itself with special clearness in Sanskrit, where an *sk* very often changes to *kh*, a phenomenon which is most thoroughly discussed in Kuhn's often-mentioned essay 'Ztschr.' iii. 326 f., and again by Ascoli 'Lautl.' 183 f. In two widely extended classes of words the supposition of a change from *σκ* to *χ* is highly probable, in the case of several verbs which are formed from shorter stems by the addition of a *χ*, and in that of the Boeotian diminutives in *-ιχο-ς* with which are allied a number of forms in ordinary Greek. As regards the verbs, we have one at all events which shows us the assumed transitional *σχ*, i. e. the present-stem *πασχ*, which we refer to *παν-σκ*. From the same stem an expanding *θ* produced *πεν-θ*, *πα-θ* (p. 63 and No. 354), so that *πά-σχ-ω* is the inchoative of *πέν-ο-μαι*, and is to be referred to *παν-σκ-ω*. As we saw on p. 694, the root has lost an initial *σ*. The ordinary supposition, that the aspirate of *πά-σχ-ω* is connected with the loss of a suppressed *θ*, cannot be proved. For we never find *θ* and *σκ* together; the former is frequent in aorists, the latter used exclusively in present stems<sup>2</sup>. If then the *σ* disappears in other verbs,

<sup>1</sup> The Skt. *spaṣa-ti* 'bind,' 'tie' compared by Fick i<sup>3</sup>. 251 with *σφίγγω* and *πνίγω* though given in Westergaard's 'Radices' is not in the 'Pet. Dict.' and there is no close connexion between the meaning given by Justi for the Zd. *spaṣ* (*avi-ṣpaṣ* 'attack,' in one passage only) and the Greek words. There the vowels are different as well.

<sup>2</sup> Grassmann 'Ztschr.' xii. 120 compares *παθ* with the Skt. *badh*



after aspiration has resulted from it, we have for this the strict analogy of the verb-forms in  $\sigma\theta$ : —  $\xi\rho\chi\text{-}\sigma\text{-}\mu\alpha\iota$  :  $\epsilon\rho\sigma\chi\text{-}\sigma\text{-}\mu\alpha\iota$  =  $\delta\epsilon\delta\acute{\alpha}\rho\text{-}\theta\alpha\iota$  :  $\delta\epsilon\delta\alpha\rho\text{-}\sigma\theta\alpha\iota$ . We can discern three grounds for such a shortening. Firstly a preceding consonant, after which  $\sigma\kappa$  was hardly pronounceable. Probably this serves to explain only  $\xi\rho\chi\sigma\mu\alpha\iota$ , which has been already repeatedly mentioned as identical with the Skt.  $\ddot{r}\text{-}k\ddot{k}h\text{-}\bar{e}$  (p. 556). Secondly the language has an objection to  $\sigma\kappa$  after a diphthong.  $\pi\iota\phi\acute{\alpha}\upsilon\sigma\kappa\omega$  (No. 407) is the only word in which the consonantal and the vowel groups of sound come together. But the  $\chi$  of  $\epsilon\upsilon\chi\text{-}\sigma\text{-}\mu\alpha\iota$ <sup>1</sup> and  $\alpha\upsilon\chi\text{-}\acute{\epsilon}\omega$  seems to have originated in the same way. The former has long since been compared with the synonymous Skt.  $v\bar{a}\bar{n}k\bar{h}$  from the rt. *van* and stands for  $\epsilon\upsilon\text{-}\sigma\kappa\text{-}\sigma\text{-}\mu\alpha\iota$ , where the  $\epsilon\upsilon$  represents the syllable *va* (cp. No. 499). The full group of consonants has been preserved in the OHG. *wunsc* ['wish,' cp. Dutch *wensch*]. The  $\chi$  which properly belongs only to the present-stem makes its way into other parts of the verb like the  $\sigma\kappa$  in  $\delta\iota\delta\acute{\alpha}\sigma\kappa\alpha\lambda\omicron\varsigma$ . Hence  $\epsilon\upsilon\acute{\xi}\sigma\mu\alpha\iota$ ,  $\eta\upsilon\acute{\xi}\acute{\alpha}\mu\eta\nu$ ,  $\epsilon\upsilon\chi\acute{\eta}$ . The same explanation may probably be given of the  $\chi$  of the denominative  $\alpha\upsilon\chi\acute{\epsilon}\omega$  'boast myself,' which Benfey i. 17 refers to the same source as  $\epsilon\upsilon\chi\text{-}\sigma\text{-}\mu\alpha\iota$

'strike,' 'kill' ('Pet. Dict.' *vadh* No. 324), *bādh* 'press hard,' 'torture.' The same view is supported by Joh. Schmidt ('Vocal.' i. 94 ff.) with a wealth of original arguments. Still he convinces me all the less because his view leads eventually to the denial of any connexion between  $\pi\acute{\alpha}\sigma\chi\omega$  and  $\pi\acute{\alpha}\text{-}\tau\iota\text{-}\sigma\text{-}\tau\epsilon\iota\text{-}\rho$ .

<sup>1</sup> The connexion of  $\epsilon\upsilon\chi\text{-}\sigma\text{-}\mu\alpha\iota$  with the Skt.  $\bar{u}h$  ( $\acute{u}h\text{-}\bar{e}$ ), which Kuhn 'Ztschr.' x. 240 gives as an addition to a remark of Pott's (W. iii. 778), is not convincing because the Skt. word approaches only in a single application the Homeric use of  $\epsilon\upsilon\chi\epsilon\tau\alpha\iota$   $\acute{\epsilon}\nu\alpha\iota$ , while in its primary meaning of 'consider,' 'mark,' 'comprehend' (cp.  $\bar{u}h\alpha\text{-}s$  'consideration') it is too far removed from  $\epsilon\upsilon\chi\epsilon\sigma\theta\alpha\iota$  'pray,' 'vow,' 'boast oneself' (cp.  $\epsilon\upsilon\chi\acute{\eta}$ ,  $\epsilon\upsilon\chi\omicron\varsigma$ ,  $\epsilon\upsilon\chi\omega\lambda\acute{\eta}$ ). Roth 'Ztschr.' xix. 220 compares  $\epsilon\upsilon\chi\sigma\mu\alpha\iota$  with the Vedic  $v\bar{a}gh\acute{a}t$  'the vowing,' 'praying' and the Lat. *vov-eo* for *\*vogv-eo*. But the Teutonic word is a proof of the early existence of *van-sk*. The B of  $\beta\epsilon\nu\chi\sigma\acute{\iota}\sigma\tau\alpha\rho\omicron\varsigma$  on the vase of Ergotimus 'C. I. G.' No. 8185 b seems to be not certain enough to be of any use etymologically. —  $\epsilon\upsilon=va$  as in  $\epsilon\upsilon\text{-}\mu\text{-}s$  'bereft' by the side of the Goth. *van-s*, Skt.  $\bar{u}n\acute{a}\text{-}s$  'in want of.' Cp. Bugge 'Stud.' iv. 328, Fick. i<sup>2</sup>. 202.

(cp.  $\epsilon\bar{\upsilon}-\omega$  by the side of  $\alpha\bar{\upsilon}-\omega$  No. 610), and also that of  $\alpha\bar{\upsilon}-\chi-\mu\acute{o}-s$  'drought,' which was given under  $\alpha\bar{\upsilon}-\omega$  No. 600 b. Lastly there is to be found in initial groups of consonants a third ground for the weakening down of  $\sigma\kappa$  to  $\chi$ , since, as will be discussed more in detail below, Greek does not like to let two consecutive syllables begin with two consonants: hence  $\beta\lambda\eta-\chi-\acute{\alpha}-o-\mu\alpha\iota$  (No. 395) by  $bal-a-re$ ,  $\gamma\lambda\acute{\iota}-\chi-o-\mu\alpha\iota$  by  $\gamma\lambda\acute{\iota}\sigma-\chi-\rho\acute{o}-s$  (No. 544),  $\pi\tau\omega-\sigma\kappa-\acute{\alpha}\zeta-\omega$  by  $\pi\tau\omega-\chi\acute{o}-s$  'beggar,'  $\sigma\mu\acute{\eta}-\chi-\omega$  'wipe' by the side of  $\sigma\mu\acute{\alpha}-\omega$ ,  $\psi\acute{\eta}-\chi\omega$  'stroke,' 'graze' by the side of  $\psi\acute{\alpha}-\omega$ ,  $\psi\alpha\acute{\upsilon}-\omega$ ,  $\psi\acute{\upsilon}-\chi-\omega$  'breathe,' 'cool,' which clearly, along with  $\psi\bar{u}-\chi-os$ ,  $\psi\upsilon-\chi-\rho\acute{o}-s$ ,  $\psi\upsilon-\chi-\acute{\eta}$ , belongs to the rt. *spu*, *sphu* discussed on p. 509.  $\psi\upsilon-\chi-\acute{\eta}$  then, like *anima* and *spiritus*, is properly 'breath.'  $\nu\acute{\eta}-\chi-\omega$ , though not in the form preserved to us, probably once had an initial group of consonants, as has been shown at No. 443. In  $\sigma\tau\epsilon\nu\acute{\alpha}\chi\omega$  (No. 220) it is possible that the  $\sigma\tau$  extended its influence even into the next syllable but one.

That the diminutive suffix  $-\iota\chi\acute{o}$  fem.  $-\iota\chi\alpha$ , mostly in Boeotian, corresponds to the common  $-\iota\sigma\kappa\acute{o}$  is denied, it is true, by Schwabe 'De deminutivis' p. 49, but when viewed in this connexion it seems very probable, especially as the Boeotians show elsewhere a disinclination to groups with a sibilant in them:  $\acute{\epsilon}\tau\tau\omega = \acute{\epsilon}\sigma\tau\omega$ ,  $\acute{o}\pi\iota\tau\theta\acute{o}- = \acute{o}\pi\iota\sigma\theta\acute{o}-$ . The forms which occur have been sufficiently discussed by Boeckh 'C. I.' i. p. 725, 708 Ahrens 'Aeol.' 216, Schwabe *ut sup.*, and Budenz 'On the suffix  $-\kappa\acute{o}\varsigma$ ' p. 76. Among the diminutives must be placed also several substantives and adjectives in ordinary Greek, e. g.  $\pi\upsilon\rho\rho\acute{\iota}\chi\eta$  'torch-dance,'  $\beta\acute{o}\sigma\tau\rho\nu\chi\acute{o}-s$  'curl,' which we may follow the 'E. M.' 205, 32 in connecting with  $\beta\acute{o}\tau\rho\nu-s$  'bunch of grapes,' and all the more certainly because  $\beta\acute{o}\tau\rho\nu\chi\acute{o}-s$  'grape-stalk,' the undoubted diminutive of  $\beta\acute{o}\tau\rho\nu-s$ , occurs with the very same meaning as  $\beta\acute{o}\sigma\tau\rho\nu\chi\acute{o}-s$ , e. g. in Pherecrates Fr. 67 Mein., in Euripides 'Phoen.' 1485 ( $\beta\acute{o}\tau\rho\nu\chi\acute{\omega}\delta\epsilon\omicron\varsigma$  [cp. Hermann *in loc.*]), and in Apollon. Rhod. ii. 679. No one of course will conceive the  $\sigma$  to have been inserted:  $\beta\acute{o}\sigma\tau\rho\nu\chi\acute{o}-s$  must be regarded as the more perfect form and hence we must assume a primary  $\beta\acute{o}\sigma\tau\rho\nu-s$ , whose origin is however lost in obscurity. In both words a reason might be found for the change of  $\sigma\kappa$  to  $\chi$  in the group of consonants in the



preceding syllable. The case of *στόμα-χο-ς* 'stomach' (No. 226 b), no doubt a diminutive of *στόμα*, is probably the same as that of *στενάχω* mentioned above. Though there is no phonetic reason to account for it, we may regard *οὐρ-αχο-ς* and *οὐρί-αχο-ς* 'end,' 'last piece,' as diminutives of *ὄρρο-ς* (No. 505), and the same relation is borne by the adjectives *νηπι-αχο-ς*, *μείλ-ιχο-ς* to *νήπιο-ς*, *μείλ-ια* (No. 464). *ἥσυχο-ς* also (No. 568) comes under this head, though if it belongs to the rt. *ās* it is hard to see how the *σ* managed to survive. The adverbial formations *πολλαχοῦ*, *ἐνιαχοῦ* etc. are no doubt of an entirely different kind.

Loss of the sibilant appears to have been combined with softening in a few cases: *γρῦ-τη* 'rubbish' = Lat. *scrū-ta* (neut. pl.)<sup>1</sup>, whence *scrūtāri*, *scrūtātor*, *scrūtiniu-m*, *γρῦπ-ο-ς* = *scirp-u-s* (No. 516 and p. 511). Since the Lat. *grad-i* seems to be related to the German *schreit-en* 'stride' (Corssen i<sup>2</sup>. 209), it is at all events very probable that *γράφ-ω* along with *γρομφ-ά-ς* (No. 138) comes from a rt. *skrabh* 'dig,' which is preserved more intact in the Lat. *scrob-i-s* 'trench' and *scrof-a* = *γρομφάς*, but also no doubt in the Bohem. *škráb-a-ti* 'scratch,' 'scrawl,' and the OHG. *scrēwōn* 'incidere.' Greek shows a dislike to an initial *σκρ* (Leo Meyer i. 189). It appeared more doubtful at No. 134 b whether *γλύφω* is to be placed by the side of *sculpo*, since there is the word *glubo* as well. Corssen, it is true, derives *γλυφ* from *skulp*, and *γλαφ* (No. 134) from *skalp* ('Nachtr.' 178). — *γνίφωνες καὶ σκνιποὶ οἱ μικρὰ προϊέμενοι καὶ διδόντες* says Aristotle 'Eth. Nic.' iv. f. 51 a. We shall probably be right in holding both names of niggards to be originally identical, and in holding the guttural in the former to be softened, especially as there 704 occur also the forms *κνιφό-ς*, *κνιφό-ς* (cp. ChSl. *skarp-ŭ* 'sordidus,' 'avarus'). Since again *κίμβ-ιξ* is another name for a niggard, *κίμβ* must be a fresh variation of the same root. Cp. Pott W. i. 679.

We find change of organ combined with transposition in *ψάρ* by the side of the German *star* ('starling'), Lat. *stur-nu-s* (No. 521), *ψι-ά* by the side of *στί-α* (No. 225), where however

<sup>1</sup> Cp. however Clemm 'Stud.' iii. 296 and Joh. Schmidt 'Voc.' 291 ff.

the second group of sounds finds the more decided support in the related languages.

Lastly we may even have more than two affections combined, or from one and the same primary form with a complete group of consonants various forms may proceed each with a different affection. We met with such a case in the rt.  $\kappa\upsilon$  with the by-forms  $\pi\tau\upsilon$ ,  $\psi\upsilon\tau$ ,  $\phi\upsilon$  (No. 382). As here,  $\phi\theta$  and  $\psi$  meet also in the (Hesych.) forms  $\delta\iota\psi\acute{\alpha}\rho\alpha$  δέλτος, οἱ δὲ διφθέρα,  $\psi\epsilon\acute{\iota}\rho\epsilon\iota$  φθείρει,  $\psi\acute{\iota}\sigma\iota\varsigma$  ἀπώλεια, and so =  $\phi\theta\acute{\iota}\sigma\iota\varsigma$ ,  $\psi\iota\theta\acute{\eta}\nu$  ἀπώλειαν,  $\psi\iota\acute{\nu}\alpha\delta\epsilon\varsigma$  αἱ ῥνάδες ἄμπελοι,  $\psi\iota\acute{\nu}\alpha\acute{\zeta}\epsilon\iota$  φυλλορροεῖ (Lobeck 'Rhemat.' 32). Hence Fick's (i<sup>3</sup>. 831) comparison of  $\phi\theta\acute{\epsilon}\gamma\gamma\epsilon\sigma\theta\alpha\iota$  'give a sound' with the Lith. *speng-ti* 'yell,' and the MHG. *spah-t* 'noise' seems a likely one. To the same class belongs  $\psi\alpha\text{-}\tau\acute{\alpha}\text{-}\sigma\theta\alpha\iota$  (προκαταλαμβάνειν),  $\psi\alpha\text{-}\tau\eta\text{-}\sigma\alpha\iota$  (προειπεῖν) which we cannot but connect with  $\phi\theta\acute{\alpha}\nu\text{-}\epsilon\iota\nu$  'anticipate,' especially when we consider the gloss  $\phi\theta\alpha\text{-}\tau\eta\text{-}\sigma\eta$  φθάση (cp. Bugge 'Ztschr.' xx. 39). Now as we are led from  $\phi\upsilon$ ,  $\psi\upsilon$  to the rt. *spu*, so are we led from  $\phi\theta\alpha$ ,  $\psi\alpha$  to *spa*, and it looks as if we had this form preserved in the ChSl. words *spě-ti* 'jacere,' 'proficere,' *spě-chŭ* 'studium,' 'celeritas,' and also in the OHG. *spuo-an*, MHG. *spuon* 'proficere,' *spuo-t* 'result.' The common primary idea is that of 'hastening' and 'overtaking.' Perhaps too the Lat. *spē-s* belongs to the same root, especially as *pro-spe-r* shows a still closer approach to the Slavonic words, and as the OLat. *spē-r-es* (acc. plur. in 'Enn. Ann.' 132) and *spēr-a-re* lead us to a stem expanded by *s*, which is also to be assumed in the ChSl. *spě-chŭ* (cp. p. 697). For the ChSl. *ch* has come quite regularly from *s*. (Cp. Pott W. i. 387, Fick i<sup>3</sup>. 829.) Corssen's objections are met by assuming with Fick that 'stretch' in the sense of 'intentio animi' is the transition stage between 'hope' and 'hurry.' From *span*, expanded by *n* comes the Lat. *spon-te*. Cp. OHG. *spanst* 'allurement.' — There is further a widely ramifying family of words which shows this phenomenon, which we must examine more closely. The connexion of the phonetically very dissimilar forms  $\delta\nu\acute{o}\phi\text{-}o\text{-}s$ ,  $\gamma\nu\acute{o}\phi\text{-}o\text{-}s$ ,  $\kappa\nu\acute{\epsilon}\phi\text{-}a\varsigma$  was recognized by Buttmann 'Lexil.' ii. 266, where however the completely distinct  $\nu\acute{\epsilon}\phi\text{-}o\varsigma$  (No. 402) is wrongly associated 705 with them. As is so often the case, Sanskrit has shown



us here the right starting-point. The primary meaning of all these forms is 'obscurity,' 'darkness.' Now the Skt. *kshap* f. and *kshap-ā*, Zd. *khshap*, *khshap-an* (f.) have the same meaning; a third form *kshap-as* (n.), under which Bopp 'Gloss.' treats most of the matter belonging here, is rejected by the 'Pet. Dict.' The root we must probably (cp. Benfey i. 617, Leo Meyer i. 367) take to be *skap* with the meaning 'cover' (Aufrecht 'Ztschr.' viii. 71, Pott ii<sup>2</sup>. 609). This root appears clearly in the Gk. *σκέπ-ω* 'cover,' 'veil,' whence *σκέπ-η*, *σκέπ-ας* 'cover,' 'protection,' and the derived verbs *σκεπάω*, *σκεπάζω*, the adj. *σκεπανός* 'covered,' 'shaded.' The first affection we have to assume is metathesis, by which *skap* becomes *ksap*, Skt. *kshap*, Zd. *khshap*. The second affection we take to be labialism, which however appears in conjunction with a third, i. e. the aspiration of the second consonant: [*spap*], *psap*, *ψάφα*, *ψέφ-ας*, *ψέφ-ος* 'darkness' (Hesych.), *ψαφαρό-ς*, *ψεφ-ό-ς* *σκοτεινός* (Hesych.) *ψεφ-ηνό-ς* 'obscurus' in Pindar. The transformation of the guttural group to the labial has analogies in the Mod. Gk. e. g. *ἐψές* = *ἐχθές* (Chalkiopoulos 'Stud.' v. 361). Between *ἐχθές* and *ἐψές* we may probably assume an intermediate form *ἐφθές*. — The rts. *φθερ* and *φθι* with the by-forms *ψερ* and *ψι* just quoted have arrived at their labial in the same way, for the former comes in meaning just as near to the Skt. *kshar* 'melt,' 'vanish,' *ksharā-s* 'perishable' (Zd. *khshar* 'flow'), as the rt. *φθι* does to the Skt. *kshi* (*kshi-ñā-mi*) 'destroy,' 'corrupt,' *kshī-ti-s* = *φθί-σι-s*, *kshajā* (m.) = *φθόη* 'consumption,' Zd. *khshi* as a verb, 'destroy,' as a subst. (f.) 'disappearance' (Benf. i. 178, 202). — A third group of forms is most simply explained by the assumption of a nasalized rt. *skamp*, related to *skap* as *tump* is to *tup* (No. 249). Greek shows a disposition to transpose a nasal, e. g. in *τμῆ-σι-s* from the rt. *τρεμ*, *θνή-σκ-ειν* by the side of *θαν-εῖν*. In this way we arrive at *sknap*, with aspiration *σνεφ*, a form which, when the *σ* is knocked off, appears in Homer as *κνέφ-ας*, and without loss of the *σ*, but with a weakening of the *ε* to *ι*, in *σκιῶφος* *σκότος*, *σκιφή* *ἄκρα ἡμέρας καὶ ἑσπέρας* (Hesych.). So too Walter 'Ztschr.' xii. 383. With *κνέφας* we may perhaps put the Lat. *crepus-culu-m* and the Sabine *Orepus-ci*

and the adj. *creper-u-s* 'dubius' (Varro 'L. L.' vi. 5, Paul. 'Epit.' p. 52 M.). Since *cn* is inadmissible at the beginning of a Latin word the *n* appears here as *r*. For this change we have at all events the analogy of the borrowed *groma* = *γνώμων*. Corssen's explanation of the Latin word from the root of *κρύπτω* (Beitr. 407) is not satisfactory, as the vowels do not agree. For Greek, it appears, softening was added to 706 the affections just mentioned. From *κνέφας* we arrived (p. 535) at *γνόφο-s*, as previously from *σκνιφό-s* we arrived at *γνίφων*. The form *γνόφο-s* 'darkness,' 'gloom' was in use at all events later — from the time of Aristotle — than *δνόφο-s*, a form called sometimes Aeolic, sometimes Doric, occurring from Aeschylus's time onward, but also supported by the Homeric adjective *δνοφ-ερό-s* (cp. *λο-δνεφ-ές*). The change of *γ* to *δ* is to be ascribed to the influence of the *ν*. The same change is to be seen in the Cret. *ἀδνό-ν* = *ἀγνόν*<sup>1</sup> (p. 535) and in *κύδνο-s* *κύκνο-s* (Hes.). In the latter case the *κ* is likewise primitive (No. 32), and the intermediate form with the *γ* is found in the Lat. *cygnu-s*. Whether *ζόφο-s* with the related *Ζέφυρο-s* the name of the wind which blows from the quarter called by Homer *πρὸς ζόφον*, belongs here is doubtful. I know of no analogy for *ζ* by the side of *δν* or *γν*. And indeed *ζόφος* has been supposed to be of Semitic origin (Hebr. *zāphōn* 'midnight region,' Müllenhoff 'Deutsche Alterthumskunde' i. 119). — The astonishing multiplicity of phonetic changes is explained partially at least by the fact that we are dealing with forms belonging to various dialects, no single one of which forms found a home in Attic Greek. — The initial group of the rt. *σβεννυμι* has experienced extraordinary changes, not only into *ξ*: *ξείννυμι*, but even into *ξ*: *ἀποξίννυται* *ἀποσβέννυται* (Hesych.). I know not how to account for this.

In two stems *πτ* corresponds to a Latin *st*: *πτάρ-νυ-σθαι* =

<sup>1</sup> Ahrens 'Dor.' 109 and Welcker 'Götterl.' ii. 596 distrust this gloss, and prefer to derive the evidently related name of the Cretan *Ἀριάδνη* from *ἀδ-εῖν*. But since the change of *δν* to *γν* is unheard of, while *Ἀριάγνη* occurs on a vase as a by-form of *Ἀριάδνη* (O. Jahn 'Description of the Munich collection of vases' p. ccv.), phonetically there is more evidence in favour of Preller's translation of the name 'die hochheilige' ('the very holy one') ('Gr. Myth.' ii<sup>2</sup>. 532.)



*ster-nu-ere* and *πτόρ-ειν* = *sternare* in *con-sternare*, *ex-sternare*, 'disconcert,' 'startle' (cp. Corssen 'Nachtr.' 115 f., Bugge 'Ztschr.' xx. 37). Whether we ought really to assume a *rt. spar* here (cp. No. 389), which shifted in Italian to *ster*, in Greek to *psar*, *ptar*, I leave an open question. Van. 1180, 1182.

G. Dissimilation with a view to avoid a like sound in consecutive syllables.

Lobeck's 'Dissertatio de praeceptis euphonicis' ('Paralipp.' 18) contains the following acute remark: 'Graeci haud facile committunt, ut easdem duas consonas in duabus continuis syllabis iterent. Etenim nullum est illis vocabulum simplex et primitivum, quod cum latinis *scisco*, *proprius* comparari possit, non ita multa quae cum vernaculis *Stillstand*, *dreidrähig*, *unausbleiblich*.' A few exceptions like *προ-πρηγής*, *τετρά-τρυφο-ς*, *βοσκέ-σκορτο*, *μισθοῦ-σθαι*, *αἰσθέ-σθαι* are mentioned, and their special character discussed. This disinclination to an excess of similarity rests on a disposition, which the language shows in a great variety of ways, to set bounds to the influence of the physical element of the sounds. Excessive similarity produces the impression of stammering and mere jingle. For this reason, not only Greek, but the other related languages as well, content themselves often in a reduplication<sup>1</sup> with one of the two elements that are to be repeated. This was the explanation given at No. 524 of the form *ἀλλήλου-ς*. The substitution of the corresponding unaspirated consonant for the aspirate: Skt. *ba-bhū-v-a*, Gk. *πέ-φῦ-κα* has the same origin. The aspirate is treated here exactly like a group of consonants, of which in like manner only a part is repeated. *ba-bhū-v-a* *πέ-φῦ-κα* are precisely parallel to Skt. *da-drām-a* = *δέ-δρομ-a*. Still the related languages seem not to have arrived

<sup>1</sup> The change of sound made on reduplication I have discussed at greater length in my paper 'Ueber die Tragweite der Lautgesetze,' Ber. d. philol. hist. Cl. d. k. sächs. Ges. d. Wissensch. 1870. Cp. 'Greek Verb' p. 356 ff., Windisch 'Ztschr.' xxiii. 223.

at definite special laws for reduplication before the separation, as is seen especially by the different treatment of groups containing a sibilant even by so nearly related languages as Latin and Greek. In this matter we can distinguish three different methods. Latin leaves the group in the first syllable intact, while it loses the sibilant in the second: *ste-t-i*, *spo-pond-i*, *sci-cid-i*. Conversely Sanskrit retains the sibilant only in the second syllable: *tí-shṭā-mī* (for *tī-stā-mī*), *pa-sparṣ-a* (rt. *sparṣ* 'touch'). Even Greek and Latin are not destitute of examples of this kind, like *qui-squil-iae* = *κο-σκυλ-μάτ-ια* (No. 114), *κα-σκαλ-ίζειν* 'tickle,' which Lobeck 'El.' i. 175 connects with *σκάλλειν* 'dig,' 'bore.' The third course, i.e. that of putting the sibilant alone in the first syllable and the full initial in the second, is adopted in the Latin *si-st-o*, and it can also be deduced as the regular course in Greek, inasmuch as *ῖ-στη-μι*, *ῖ-στη-κα* decidedly point to *σι-στη-μι*, *σε-στη-κα*. — It is clear however that, in the course of the history of language, softness, or, if we like, weakness was constantly on the increase. Of two initial consonants not only one but both are suppressed. Language contents  
 708 itself with the simple vowel by way of a rudimentary reduplication. This is the explanation of the apparent coincidence of the reduplication with the augment in the perfect: *ἔ-στικ-ται*, *ἔ-ζωσ-μαι*, *ἔ-κτον-α*, *ἔ-γνω-κα* by the side of *πέ-πληγ-α*, *κέ-κτη-μαι*. These examples are enough to show that the language was not consistent throughout. — But more remains to be said about the transformation in question. Lobeck justly classes forms like *λυπρόκρεως* with forms like *μακρόκρανος*. It is not only identical but similar biconsonantal initials that are avoided in two consecutive syllables. We have here to do, however, not with a mere loss of sound. Whole syllables may become lost, so that it would be more correct to talk of a shortening. The sporadic character of these changes is unmistakeable.

The tendency to dissimilation in the sense discussed above can make itself felt in two directions. Either the first syllable is lightened or the second. The first syllable has experienced a change of this kind in the following words. — *ἵχλα* ἡ *κίχλα* ('thrush') in Hesychius is most simply



explained in this way as a softening of the more usual form. The synonymous *κι-χήλη* (Aristoph. 'Nub.' 339) shows still more clearly that *κι-* is a reduplication syllable (cp. Brugman 'Stud.' vii. 314, Van. 256). *ἔχλα* (cp. *ἔχλαλη ἴσκλη*, Hes.) is on this point precisely parallel to forms like *ἐ-χλεύασται*. — With this *ἔχλα* Lobeck ('El.' i. 107) associates *δγχνη* 'pear,' ('Od.') by the side of which Hesych. gives *κόγχνη*. We have at any rate the possible alternative of supposing that *κόγ-χνη* was the full form. I can find no etymon for it. — Perhaps in the case of *δκ-νο-ς* we can find one. Benfey ii. 22 assumes an initial *f*, relying on the form *ἄ-οκνο-ς*. But this by no means establishes the digamma, as is shown by *ἄ-οδρο-ς* (rt. ὀδ No. 288), and *ἄ-ορν-ο-ς* (No. 503). *δκνεῖν* is the reverse of *τολμᾶν*, *δκνηρός* of *τολμηρός*, and it occasionally acquires the notion of 'anxiety,' 'fear.' In meaning then *δκνεῖν* coincides completely with *cunctari*. *cunctari* is evidently a frequentative, which we can refer to a rt. *cunc*, and this finds its analogon in the Skt. *ḥaṅk* (*ḥáṅk-ē*) 'to have anxiety' or 'scruple,' *ḥaṅk-ā* 'anxiety,' 'doubt.' We may accordingly assume an Indo-Germanic rt. *kak*, nasalized *kaṅk*, and refer *δκ-νο-ς* to *κοκ-νο-ς*. This comparison is specially interesting inasmuch as we have here to do with an intellectual idea, which is shown to be common to many languages by the community of the root. Whether the physical meaning has survived in the Goth. *hah-an* 'hang' (Fick i<sup>3</sup>. 544) in which case *haesitare* would be the primary notion, I cannot decide. — The rather late form *ἔ-πτα-μαι* 'fly' 'Gk. Verb' p. 108 is related to the poetical aorist *ἐ-πτά-μην* (No. 214) as *τί-θε-μαι* 709 to *ἐ-θέ-μην*. No doubt *ἔ* with the characteristic spiritus asper does duty here for a reduplication. We meet with the same spiritus in *ἔψ-ω* 'cook,' by the side of *δψο-ν* 'relish,' which Pott i<sup>1</sup>. 233, ii<sup>2</sup>. 780, Benf. ii. 89 place under the rt. πεπ (No. 630). *ἔψ-ω* stands for *πεψ-ω* and is expanded from the rt. πεπ p. 465 by a determinative *σ* as αὐγ is to αὐξ (cp. p. 64). There are two more noun-forms which undoubtedly belong to the same root, first *ὀπ-τό-ς* 'roast' with its derivatives *ὀπτά-ω*, *ὀπταλέος* in spite of their difference of meaning, — *ὀπτό-ς*, *ὀπταλέο-ς* being used for 'roast' as opposed to *ἐφθό-ς*, *ἐψαλέο-ς* 'boiled.' In *πέσσειν*, which, like *ὀπτᾶν*, is

used of the baking of bread, the two uses meet. There can be nothing surprising in the fact that the difference in form was utilised for a further differentiation of meaning<sup>1</sup>. — Lastly the forms *φάτρα*, *φατρία* belong here: although they are not so well attested as *φράτρα*, *φρατρία* (No. 414) and are now generally replaced by them in good editions, they have been found on inscriptions where *φα* is a shortening of the word (Roehl 'Ind. ad C. I. Gr.' p. 15) and are recognized by grammarians (Hesych., Bekker 'Anecd.' 115, 2a).

It seems not improbable that the second syllable was lightened in *πτε-ρό-ν* 'wing'. The common instrumental suffix *-τρο* (cp. *ἄρο-τρο-ν*, *λου-τρό-ν*) joined to the rt. *πετ* (No. 214), transposed to *πτε*, would give *πτε-τρο-ν*. We assume that the language dropped the *τ* in the second syllable to avoid the harsh sound. The Skt. *pāt-tra-m* (by the side of *pāt-a-tra-m* and *pa-tra-m*) agrees with the OHG. *fēd-ara* and the Gk. *πέ-τρο-ν*. Bergk's acuteness has recognized the latter form in the papyrus fragments of Alcman ('Philol.' xxii. 5, 'Poet. Lyr.<sup>3</sup>' p. 834). In these fragments *ὑποπετριδίων* occurs as an epithet of *ὀνείρων* instead of the ordinary *ὑπόπτερος* 'winged.' From the primary *\*πτε-τρο-ν* then there came on one side *πέ-τρο-ν* by a lightening of the first syllable, on the other *πτε-ρό-ν* by a weakening of the second. Osthoff 'Forsch.' i. 171 assumes for *πτέ-ρο-ν* a suffix *-ρο*, but this does not agree with the use of that suffix. — *κοχ-ώνη* (No. 70) 'the part from the thighs to the anus' we connected with *cox-a*, *cox-endix* and some Sanskrit words, the primary notion of which was that of a hollow, applied to different parts of the body. In any case *κόκκυξ*, with the grammarians' interpretation  
 710 *τιον τοῦ ἱεροῦ ὁστέου τὸ πρὸς τοῖς ἰσχίοις* (Lobeck 'El.' i. 171), also belongs here. For *κοχ-ώνη* itself is interpreted by *ἱερὸν ὁστοῦν* ('coccyx,' 'os sacrum'). Probably then *κοχ-ώνη* arose out of *\*κοξωνη* and bears to *coxa* the same relation as that of *κορ-ώνη* to *cor-vu-s*, *κόρ-αξ*. The *ξ* of the second syllable

<sup>1</sup> The derivation of *ἱπ-νό-ς* 'stove' from the rt. *πεν* has been rendered questionable by Joh. Schmidt's discovery of the Old-Prussian *umprī-s* of the same meaning ('Ztschr.' xxii. 192). The two words occur however in remote families of speech and are quite isolated, and I am not so sure as Joh. Schmidt is of their connexion.



would then have here passed into  $\chi$ , as in  $\nu\acute{\chi}\iota\omicron\varsigma$  from  $\nu\kappa\tau\iota\omicron\varsigma$ , where we may surely venture to assume an intermediate form  $*\nu\chi\iota\omicron\varsigma$ , and as in  $\acute{\epsilon}\phi\text{-}\theta\acute{o}\varsigma$  the  $\psi$  of  $\acute{\epsilon}\psi\omega$  appears as  $\phi$ . We saw at p. 702 how the same letters in a different order ( $sk$ ) were replaced by the same aspirate in  $\gamma\lambda\acute{\iota}\text{-}\chi\omicron\mu\alpha\iota$ ,  $\nu\acute{\eta}\text{-}\chi\omega$  (for  $\sigma\eta\chi\omega$ ),  $\pi\tau\omega\text{-}\chi\acute{o}\varsigma$ ,  $\sigma\mu\acute{\eta}\text{-}\chi\omega$ ,  $\psi\acute{\eta}\text{-}\chi\omega$ ,  $\psi\acute{\upsilon}\text{-}\chi\omega$ . The same theory will serve to explain  $\tau\rho\acute{\upsilon}\text{-}\chi\omega$ , which we discussed under No. 239 in its relation to  $\tau\rho\acute{\upsilon}\omega$ . In this case the full form  $\tau\rho\acute{\upsilon}\sigma\kappa\epsilon\iota$  has been preserved in Hesych. and is explained by  $\tau\rho\acute{\upsilon}\chi\epsilon\iota$ . In all cases the vowel before this  $\chi$  which has come from  $\sigma\kappa$  is long. It should be noticed that the language elsewhere occasionally admits groups of sound like those we see avoided here:  $\tau\iota\text{-}\tau\rho\acute{\omega}\text{-}\sigma\kappa\omega$ ,  $\theta\rho\acute{\omega}\text{-}\sigma\kappa\omega$ . Here too then we have to deal with no universally applicable linguistic law<sup>1</sup>.

#### H. Sporadic Vowel-change.

At p. 439 ff. we recognized in the preservation of  $e$  and  $o$ , as opposed to the further weakened Italian  $i$  and  $u$ , a very old trait of the Greek language. Now is the time for giving the exceptions, and they will be followed by another vowel-change which occurs in isolated instances. We shall be able to be brief here, as the individual cases are mostly self-evident, and have moreover nearly all of them been already discussed from other points of view. See also the collections of Pott i<sup>1</sup>. 3 ff., Christ 25 ff., Leo Meyer i. 115 ff<sup>2</sup>.

<sup>1</sup> On the same principle of 'shortening' is to be explained the loss (where it can be established) of the first of two similarly sounding syllables in Gk. and Latin, treated by Fick 'Ztschr.' xxii. 98 ff. and 371 f., and likewise of formations like  $\tau\rho\acute{\alpha}\text{-}\pi\epsilon\zeta\alpha$  for  $*\tau\epsilon\tau\rho\acute{\alpha}\text{-}\pi\epsilon\zeta\alpha$  and (acc. to Fick)  $\tau\rho\upsilon\text{-}\phi\acute{\alpha}\lambda\epsilon\iota\alpha$  (cp. above p. 448). In the case of compounds Lobeck 'Paralipp.' 44 has already noticed the same process: e. g.  $\acute{\eta}\mu\acute{\epsilon}\delta\iota\mu\mu\omicron\nu$  =  $\acute{\eta}\mu\acute{\iota}\mu\acute{\epsilon}\delta\iota\mu\omicron\nu$  'C. I. G.' 5773,  $\acute{\alpha}\mu\phi\omicron\rho\epsilon\acute{\upsilon}\text{-}\varsigma$  =  $\acute{\alpha}\mu\phi\iota\phi\omicron\rho\epsilon\acute{\upsilon}\text{-}\varsigma$ ,  $\tau\acute{\epsilon}\tau\rho\alpha\chi\omicron\nu$  (Boeckh  $\tau\epsilon\tau\rho\acute{\alpha}\chi\omicron\nu$ ) =  $\tau\epsilon\tau\rho\acute{\alpha}\delta\rho\alpha\chi\omicron\nu$  on a Boeot. inscr. 'C. I. G.' 1570 b. Also cp. Angermann 'Die Erscheinungen der Dissimilation' Meissen 1873.

<sup>2</sup> So important a place has the investigation of the vowels taken of late that since p. 439 was printed there have reached me no less

711 1. *i* AS THE REPRESENTATIVE OF AN ORIGINAL *a*.

It is extremely probable that in the Italian languages, whenever an original *a* became *i* it was through an intermediate *e* (p. 439). The same course may be conjectured for the limited number of forms which show the same change in Greek. By far the greater number of them have forms with the *e*-sound as well. The tendency to this softening appears strongest before groups of consonants, the weight of which seems to have robbed the preceding vowel of some of its fulness, in the same way in which we now and then see, e.g. in the Ion. ἀπόδεξις = ἀπόδειξις — to which we can now add ἀποδεκνύντες (inscr. from Chios in Cauer 'Del.' No. 133) — the influence of a double consonant reduce diphthongs to simple vowels. Still more exactly does this correspond to the Irish tendency to change *a* before a nasal group to *i*, e.g. *imm* 'beside,' OGall. *ambi*-, Gk. ἀμφί.

Accordingly we find *i* as the representative of *ε* before double consonants in the following words. First in eight verbal forms, seven of which are distinguished from other nearly related formations by the addition of a syllable beginning with *ν*: ἔλλω by the side of ἐλλω, ἐλύω (No. 527), κίρ-νῆ-μι by the side of κερά-ω, κερά-νν-μι (No. 52), and the Lesb. inf. κέρναν = κιννάσαι Blass 'Hermes' xiii. 383, κτίν-νν-μι by the side of κτείν-ω, κτά-μεναι (No. 77 b), ὀριγ-νά-ο-μαι by the side of ὀρέγ-ω (No. 153), πιλ-να-μαι 'approach' and πιλ-νά-ω 'make to approach' by the side of πέλ-ας, πελά-ζ-ω, which were discussed at No. 367, πιτ-νῆ-μι by the side of πετά-νν-μι (No. 215), πίτ-ν-ω, πιτ-νέ-ω by the side of πεσ-εῖν (No. 214), σκίδ-να-μαι by the side of σκεδ-άνν-μι (Nos. 294, 295), words in which the variation of the vowel is not confined to Greek alone. A similar relation exists between σκίμπ-τ-ω and σκήπ-τ-ω (No. 108), χρίμ-π-τ-ω and the rt. χρα-ν (χραίνω), στίλ-β-ω and στερο-π (cp. above p. 539). These forms bear to those

than four large books on this subject, of which I only mention (with reference to the note on p. 441) the most systematic: F. de Saussure 'Mémoire sur le système primitif des voyelles dans les langues Indo-Européennes' Leipz. 1879. Two confine themselves mainly to the Teutonic languages.



with the *e*-sound the same relation as that of the Lat. *quinque* to the Gk. *πέντε*, *πέμπε*, and that of *ting-o* to *τέγγ-ω*. We find groups of consonants containing sibilants in *ἴσ-θι* 'be,' from the rt. *éc* (No. 564) by the side of *ἔστί*, *ἔσται* etc., *νίσσ-ο-μαι* from the rt. *vec* (No. 432) by the side of *νέ-ο-μαι*, *νόσ-το-s*, *ἴζ-ω* by the side of *ἔδ-ος* rt. *éd* (No. 280), *χθιζ-ό-s* (p. 619) by the side of *χθές*, groups containing *ρ* in *ἰδ-ρύ-ω* by the side of *ἔδ-ρα* rt. *éd* (No. 280), *λικ-ρι-φίς*, *λικ-ροί* by the side of *λεκ-ροί*, *λέχ-ριο-s* (No. 540), *οἰκτιρ-μό-s*, *οἰκτίρ-μων* (cp. the OAttic *οἰκτίρας* 'Gk. Verb' p. 255) by the side of *οἰκτεῖρ-ω* (Aeol. *οἰκτίρῳ*). The length of the *ι* in *ἰμάτ-ιο-ν*, the stem-word of which is preserved by Hesych. *ἱματαῖα ἰμάτια*, is no doubt to be explained by the supposition of an older *ἰσ-μα* for *φес-μα* (No. 565). Here too then we have two consonants. The length of the *ι* would be accounted for by the principle of compensation, like that of the Ion. *εἶμα* and the Dor. *γῆμα*. — Similarly *χελιδών* (No. 187) for *χελενδών*, *χίλιοι*, beside the Aeol. *χέλλιοι* (Ahrens 58) probably belonging to the Skt. *sahásra*, *χίραλέος* 'chapped' perhaps belonging to the Lat. *horrēre* (rt. *hors*) (Fick i<sup>3</sup>. 582 ff.). Many cases that belong here have been discussed by Walter 'Ztschr.' xii. 386, and others by Joh. Schmidt 'Voc.' ii. 329 ff.

In the case of the few words too where the *ι* that has come from *α* has no *ε* corresponding to it, there are for the most part double consonants,—*ἴππο-s* by the side of *ἴκκο-s*, where the Italian languages show the *e*-sound (p. 462), just as we have *κρί-νω* by the side of the Lat. *cer-no* (No. 76), *ρίζα* (No. 515) Lat. *rad-ix*, *ρίο-ν* beside *δρο-s* (No. 504), *σκιρ-τά-ω* 'hop' (p. 697), which is related to *σκαίρ-ω* as the Lat. *sal-t-o* is to *sal-i-o*. The case of the long *ι* of *Ἐρῖνύ-s* (No. 495) is the same as seemed probable in that of *ἰμάτιον*. Here a *j* has fallen out after *ν*. — *δπ-ῖπ-εύ-ω* along with *-οπ-ῖπ-α-s* (p. 463) with the peculiar weakened reduplication in the second syllable has for its *ι* the analogy of *δί-δω-μι*, *βι-βρώ-σκ-ω*, in which the reduplication syllable uses the same vowel, *-οπῖπας* that of *πῖ-φαύσκω* for the length of the vowel. On *δνίνημι* see p. 715.

The remaining cases are but few in number: *κνίδ-η* 'nettle' beside the OHG. *hnazza* and *nezila*, and *κναδάλλειν* 'itch' (Fick i<sup>3</sup>. 537), *πίτ-υλο-s* 'the splash of an oar or of drops of water,' probably belonging to the rt. *πετ* (No. 214) (Fick i<sup>3</sup>. 659),

whence comes *πιτ-νέ-ω*. Possibly the *v* has here had something to do with the thinning of the vowel, as in *ιδρύω*, *Ἐρι-νύ-ς* and in the Aeolic and Homeric *πίσυρες*. We might perhaps ascribe the same influence to the *ι* in *σφι-σί* by the side of *σφέ* and in *ἴδιο-ς* discussed at p. 635 (cp. *ἴσθι*, *λικριφίς*). The variation between *ὀψέ* and *ὀψι-* in *ὀψι-τέλεστο-ς*, *ὀψι-μαθ-ής*, *ὀψι-νοο-ς* reminds us of Latin forms like *beni-gnu-s* by the side of *bene*. Still the origin of the vowel is by no means evident. The old grammarians regarded *δψι* used separately as Aeolic (Ahr. 'Aeol.' 80). Conversely we find *ε* for the *ι* of *ἄγχι* (No. 166) in the Homeric compound *ἄγχε-μαχο-ς*. Perhaps both vowels arose by weakening from *ει* (cp. *ἄμαχεί*). — *ἰτ-αλό-ς* by the side of *vit-ulu-s* (No. 211) and the Skt. *vat-sá-s* had perhaps originally a double *τ* in Boeotian fashion for *τσ*. — We are compelled anyhow to acknowledge the change of *a* to *i* without special reason in *σκι-ά*, *σκι-ρο-ν*, *σκι-ρο-ς* (No. 112), *χρί-ω* from the rt. *ghars* (No. 201), in *πί-νω* by the side of the Aeolic *πώ-νω* (No. 371), in *μι-νύ-ω* (No. 475) where several related languages share this weakening, in *σπι-θ-αμή* 'span' from the rt. *σπα* (No. 354) the primary meaning of which is here prominent, and in the related glossematic words *σπιδής*, *σπίδιος* 'extended<sup>1</sup>'. For a discussion of the long *ι*, which we find, in connexion with metathesis, e. g. in *κρίθ-ή* (No. 76), *βρί-θω* (p. 475), *ρίπ-τω* (No. 513), *τρίβω* (p. 223), *σφρῖγάω* (p. 700), in the place of an original *a*, see Delbrück 'Studien' i. 2, 131 ff.

In non-Attic dialects the phenomenon is far commoner. We often find in Aeolic, as in Doric, an *ε* replaced by *ι* before vowels, e. g. Boeot. *ἰών* = *έών* (rt. *έc*), Cypr. *κατ-έ-θι-γαν* = *κατ-έ-θε-ν*, Lacon. *σιά* = *θεά*, though in this case both sounds have not seldom arisen from an older *ει*, as in *χρύσ-ιο-ς*, Ep. *χρύσ-ειο-ς*. The *ι* is alike Doric and Ionic in *ἰσ-τία*, Ion. *ἰσ-τίη* = *έσ-τία* (No. 610), again, that is, before a double consonant, as also in the Cyprian *πιλ-νό-ν'* *φαιόν* (Hesych.), which is undoubtedly related to *πελό-ς*, *πελιό-ς*, *πολιό-ς* (No. 352). The Cyprian dialect (cp. M. Schmidt 'Ztschr.' ix. 290 ff.) shows the softening

<sup>1</sup> Bréal 'La mythe d'Oedipe' ('Mélanges de Mythologie et de Linguistique' p. 169) assumes a change of *a* to *i* in order to refer *Ἰξίων* to an assumed *Akshivan*, supposed to mean 'Car-man,' 'Wheel-man,' i. e. the sun-god (No. 582). Cp. however No. 24 b.



to a still greater extent. Here and in the Arcadian dialect of Tegea (Michaelis 'Jahn's Jahrb.' 1861 p. 591) the preposition *ἐν* occurs as *ίν* and, as in Latin, stands for *εῖς* as well (No. 425). To the forms in which *ι* has taken the place of *ε* the Paphian *ἱγγία* *εῖς* (Hesych.) no doubt belongs. We may assume a form *σιγ-γία*, which would then stand for *σεγ-γία*. The stem is that discussed at No. 599, preserved in the Latin *sem-el*, *sim-plex*, and the diminutive *sin-g-uli*. The *γ* of *ἱγγία* may stand for *κ*. Perhaps *-ια* is the same suffix as occurs in *un-c-ia* (cp. on No. 445), though if so we should certainly have expected *ἱγγία* in Greek.

## 2. *υ* THE REPRESENTATIVE OF AN ORIGINAL *α*.

The softening of an original *α*-sound to the duller *υ* might be shown to have extended over about the same range as that into *ι* just discussed. As there *ε* was the intermediate step between *α* and *ι*, so here *ο* comes between *α* and *υ*. And in fact the *υ* here to be discussed very often has a corresponding *ο* either in the dialects of Greek itself or in Latin. But since the Gk. *υ* is a proportionally late sound, it seems probable that it was always immediately preceded by the fuller *υ*-sound, 714 and that consequently the series in this case was the following: *α, ο, υ, ῡ*. It is only when so comprehended that this shifting of the vowel is seen in its true character, i. e. as a dulling of the sound. In complete accordance with this is the fact that the Aeolic dialect, which, like the Italian languages, and most unlike Ionic, shows in its various branches a very old dulling of its vowels, is specially prone to this particular change. I have discussed this point at greater length in my essay 'Zur gr. Dialektologie' 'Nachr. d. Gött. Ges. d. Wissensch.' Nov. 1862. Compare also Leo Meyer i. 121. Schleicher 'Compend<sup>3</sup>' 59 justly condemns the attempt at explaining every *υ* by the supposition of forms with *Fa*. It is only where, as in the case of γυνή, Boeot. βανά, Goth. *qvinô* (p. 479), there are clear indications of this group, that we can venture to assume *Fa* as preliminary to *υ*.

In this change too we ought certainly to regard the adjoining consonants as instrumental. The nasals and the sounds *ρ*

and λ, in the case of which we find the greatest variation in the neighbouring vowels, come in for the greatest share of consideration here, and among the explosives, as Sonne 'Ztschr.' x. 130 remarks, specially the gutturals. Here too we must refer to Joh. Schmidt's exhaustive investigation ('Voc.' ii. 333 ff.). There are but a very few word-stems which have υ in the place of α consistently throughout all their ramifications. Perhaps the only cases are λύκο-ς by the side of the Indo-Germanic *varka-s* (No. 89), and Lat. *lupu-s*, *μωρ-μύρ-ω* (No. 477) by the side of the Skt. *mar-mar-a-s*, *μύλη*, *μύλο-ς* by the side of *molo* (No. 481), *μύρ-ο-ν* 'salve,' *μύρειν*, *μύρεσθαι* 'flow,' perhaps belonging to the Goth. *smairthr* 'fat,' ON. *smjōrr* 'butter' (Fick i<sup>3</sup>. 836), OIr. *smir* 'marrow,' *νύξ* by the side of the Skt. *nák-ti-s* and the Lat. *nox* (No. 94), *ξύν*, *σύν*, discussed in its relation to *con-*, *cum* on p. 544, *δρυξ* by the side of the Skt. *nakhá-s* (No. 447), *πύξ*, *πυκ-ινό-ς* (No. 384), cp. Lat. *pug-nu-s*, by the side of the rt. *πακ*, *παγ* (No. 343), where the difference of vowel is attended by a modification of the meaning, *φρύγ-ω* (aor. p. *ἐ-φρύγ-ην*) by the side of the Indo-Germ. *bharg* (No. 162), which is discussed along with *χρῦσό-ς* (No. 202), *βρῦχάομαι* 'roar' (= Skt. *barh* 'roar,' of elephants, and the Low Germ. *bōlken*), *τρῦπάω* (No. 239) discussed by Delbrück 'Stud.' i. 2, 136.—Elsewhere the variation occurs only in isolated words. By the side of *ἀγείρω* (cp. *gre-x* Van. 209), *ἀγορά* we have the Aeolizing *παρ-ήγυρι-ς* and *ἀγύρ-τη-ς*. We may learn how widely the dialects diverged in this stem from Hesychius's glosses *ἀγαρρί-ς* *ἄθροισις* (i. e. *ἄγερ-σι-ς*), *ἄγυρι-ς* *σύνοδος*, *ἀγαρεῖν* *συναθροίζειν*, to say nothing of words which we have good grounds for suspecting. — *γῦρ-ι-ς* and *γρῦ* were  
715 discussed under No. 180 along with the words coming from the st. *gar*. — *κύκλο-ς* and *κίρκο-ς* (No. 81) both correspond to the Skt. *kakrá-s*, as too we find an older by-form *καλινδέω* as well as *κυλινδέω*. — By the side of *δνόμα* (No. 446) there have crept into ordinary Greek *ἀν-ώνυμο-ς* (Ep. *νώνυμν-ο-ς*), *συν-ώνυμο-ς* which resemble the Aeol. and Dor. *δνυμα*. Perhaps dissimilation was the object of the change, though in such cases as *δοβο-ς* and *ἐψόροφο-ς* dissimilation failed to produce any effect. — By the side of the widely-spread suffix *-τορ*, nom. *-τωρ* we find *μάρ-τυρ* (No. 466), the suffix of which reminds us of



the similar dulling in the case of the Lat. *datū-ru-s* by the side of *da-tor* and the Skt. gen. abl. *mātur* for *\*mātars*. — To these we may also add the *υ* of *Δειπάτυρο-s* discussed on p. 617. — Perhaps *σκούφος* 'vessel,' 'goblet,' is only a by-form of *σκάφος* (No. 109). — *σπυρ-ί-s* 'basket' (p. 503) is probably related not only to the Lat. *spor-ta*, *sport-ula* but also to *σπεῖρα* (Old Att. *ΣΠΕΡΑ*) 'ball of thread' and *σπάρ-το-ν* 'string,' Lith. *sparta-s* 'band' (under No. 389), so that the common idea is that of 'winding.' — Perhaps *πύλη* 'door' is the fem. of *πόλο-s* 'pivot,' 'pole' from the rt. *πελ* 'turn,' discussed on p. 470. — There is no doubt that the old word *πρύ-τανι-s* is connected with *πρό* (No. 380), even though we should choose to follow Ahrens 'Aeol.' 84 in rejecting the reading *πρότανις* in a Lesbian inscription. The suffix is related to that of *ἐπ-ηε-τανό-s* (No. 585) and the Lat. *diū-tinu-s* as the Lat. *humili-s* is to the Gk. *χθαμαλό-s*. — *φύρκος* *τείχος* and *φοῦρκος*. *ὀχύρωμα* (Hesych.) certainly belongs to the rt. *φρακ* (No. 413). Cp. Joh. Schmidt 'Voc.' ii. 333. — It is very questionable on the other hand on the score of formation and meaning whether, in spite of what Misteli says ('Ztschr.' xvii. 173), *πρύμνα* 'puppis,' *πρυμνό-s* 'extremus' are to be referred to *πρό*, while there can be no doubt that they are connected with *πρέμνο-ν* 'root' or 'foundation,' and perhaps with *πέρ-ας* (No. 357). — The same relation is borne by the Homeric *προ-θέλ-υ-μνο-s* (No. 316) 'from the very ground,' and the plural substantive *θέλυμνα* in Empedocles, to Hesychius's *θέλεμνο-ν*. We may perhaps regard these and other Homeric words as real Aeolisms, of which there are by no means few in the Iliad and Odyssey, and so explain *ὑπό-βρυχ-ο-s*, *ὑπο-βρύχ-ιο-s*, *περι-βρύχ-ιο-s* (Soph. 'Ant.' 336) 'deluging,' by the side of *βρέχ-ειν* 'wet' (No. 166 b), *δια-πρύσιο-s* 'penetrating,' by the side of *διαμ-περ-ές*, certainly *πίσυρ-ες*, Lesb. *πέσσυρ-ες* (p. 488), *ἄμυ-δι-s* (No. 449), *ἄλλυδις*, which we have other means of proving to be Aeolic, the very old *ἀμύμων* (No. 478), due perhaps to the traditional dialect of the Aeolic bards, by the side of *μῶμο-s*, which we shall not follow Hugo Weber ('Philol.' xvi. 712) in connecting with *ἀμύνω*. I also class *αἰσυ-μνή-της* (θ 258) and the proper name *Αἴσυμνο-s* (Α 303) in 716 the same list. The former must stand for *αἰσο-μνή-τη-s* and

mean originally 'the man who is mindful of the αἶσα' (No. 569), 'the equal share,' who is careful μή τίς οἱ ἀτεμβόμενος κίη ἴσης. Compare μνήσασθε δὲ θούριδος ἀλκῆς, μνήμονα φόρτου. This etymology, given among others even in the 'E. M.,' is certainly simpler than Döderlein's from ὑμνεῖν ('Glossar.' 170) in its original meaning of 'weaving.' — Perhaps we may reckon among these Aeolisms the Homeric πύμα-το-ς 'the last,' which is related to the Osc. *pos-mo-s* 'the last,' recognized by Ludw. Lange ('Die osk. Inschr. der tabula Bantina' p. 63), as ἐβδόμα-το-ς is to ἑβδομο-ς. πύμα-το-ς then stands for ποσ-μα-το-ς like ἔ-μεναι for ἐσ-μεναι and is to be referred to the same st. *pas*, which we find preserved in the Skt. *paç-kā-s* 'behind,' 'later,' *paç-kī-mā-s* 'the last,' in the Zd. *paç-ca* (adv.) 'behind,' *paç-nē* (prep. c. acc.) 'behind,' in the Lat. *pos*, *post*, *post-eru-s*, *postrē-mu-s*, *pō-ne*, in the Umb. *pus*, *pust*, *pus-tru*, and in the Lith. *pas-kūi* (adv.) 'later,' *pās-k-ui* (prep.) 'behind,' 'after,' and hence is an isolated remnant of a family of words which has spread widely elsewhere. Cp. also πύννος (or πύνος) ὁ πρωκτός Hesych. (Fick i<sup>3</sup>. 672). — The Homeric ἐπι-σμυγ-ερῶς 'piteously,' 'woefully' probably belongs to the OHG. *smāhi* 'small,' 'slender,' and so to a rt. *smak* from which Fick i<sup>3</sup>. 835 also derives σμικ-ρό-ς (above p. 693). — βυθ-ό-ς, βυσσό-ς by the side of βαθ-ύ-ς, βένθ-ος are completely isolated. Cp. above p. 473.

The conditions under which *v* takes the place of an *a*-sound in Lesbian Aeolic are discussed by Ahrens 78, 81 ff. Even Boeotian, though elsewhere averse from this change, takes the same course at all events in the treatment of the diphthongs *oi* and *ω*, e. g. in *fūko-s* = *foīko-s*, δάμν = δήμω. The Tegeatic and in part Cyprian forms ἀπύ, ἄλλν, κατύ (Michaelis 'Fleckeisen's Jahrb.' 1861 p. 591) completely agree with Lesbian Aeolic. We might arrive at more exact views on the relation of the different dialects to each other from a study of proper names, for some show this very change of vowel, e. g. 'Εφύρα (cp. ἔφορος) from the rt. *Fop*, the 'Watch' (No. 501), the Corinthian Σίσυφος (p. 512), whose very name stamps him as Αἰολίδης, Στενύ-κλαρο-ς, i. e. στενό-κληρο-ς (cp. στενο-χωρία) in Messenia, Ζάκυνθο-ς (p. 617), words which may be quoted as prominent examples of this change of vowel.



(3) *ι* AND *υ* INTERCHANGED.

These two vowels are phonetically not far apart. The older grammarians were very ready on this account to hold them as nearly equivalent etymologically, a mistake against which <sup>717</sup> the comparative study of languages has uttered warnings from the beginning. For all this we must not absolutely deny all connexion between the two.

The peculiar sound of the vowel *υ* is clearly the ground of the objection which, though, as *γλυκύ-ς* shows, it was not absolute, the Greeks nevertheless felt to the repetition of *υ* in two consecutive syllables. In such cases *υ* is often replaced by *ο*: *κο-χύ- πολύ, πλήρες* (Hesych.) from the rt. *χυ χέω* (No. 203), *μορ-μύρ-ω* (No. 477), *πορ-φύρ-ω* (No. 415), *κόκ-κυξ* (No. 66). This course seems the older one. It probably dates from the time when instead of the thinner *υ* the fuller *υ* was still heard. In view of this explanation we may compare the substitution in the Cyprian dialect of *ο* for *υ*. There is abundant evidence of this change, which is discussed by M. Schmidt 'Ztschr.' ix. 306, and it is no doubt to be regarded as a change not so much from *υ* as from the older *υ* to the related *ο*-sound. The Paphian *θοράνας ξέω*, for which M. Schmidt is probably right in reading *θοράνδης* (= *θύραξε*), is thus exactly parallel to the Lat. *foras* (No. 319), and *ἰγκαφότευε* = *ἐγκαταφύτευε* to the Lat. *fo-re* (No. 417). No trace of this peculiarity is to be found in the inscriptions. — The other course is to represent *υ* by *ι*, which was done most clearly in *φῖ-τυ-ς, φι-τύ-ω* = *fi-tu-o* from the rt. *φυ* (No. 417). It is due no doubt to this objection to the repetition of *υ* that in Greek, where *-υλο* is a common diminutive suffix, the Lat. *mu-tilu-s* is represented by *μί-τυλο-ς*, while the form *μύτιλο-ς* is also to be found in Hesych. with a kindred meaning, and the name of the town has both forms, *Μυτιλήνη* and *Μιτυλήνη*. It is not quite clear what the origin of the word is, though it seems natural to connect it with *μιστύλλω* and the rt. *μι μινύ-ω* (No. 475), in which the *ι*, as we saw, comes from an older *α*. — *ψίθ-υρο-ς* in its relation to *ψύθ-ος* was discussed on p. 530. — The converse change, that of *ι* to *υ*, appeared to us probable in *κι-κύ-ω* (*ταχύνω*) under No. 57.

Besides these there are but few instances of the interchange of *ι* and *υ*. Four forms, which evidently come from stems in *υ*, have this in common, that their vowel becomes *ι* when followed by another vowel: *δρί-α* (pl.) 'bushes,' belonging to *δρῦ-ς* (No. 275) explained by Joh. Schmidt 'Voc.' ii. 331 as from \**δριφ-ο-υ* (cp. *δόρυ*), *θί-ασο-ς* 'rout,' which cannot be separated from the *θυιάδες* and consequently belongs to the rt. *θυ* (No. 320), with the same suffix which meets us in *πέτ-ασο-ς* 'hat' (No. 215), and is established by Indic analogies as well by Aufrecht on *Uḡgvaladatta* 271, *σί-αλο-ς* 'hog,' a kind of diminutive from *σῦ-ς* (No. 579), and *ὑπερ-φί-αλο-ς* 'overbear-  
718 ing,' which, along with Aeschylus's *ὑπέρφει* and the commoner *ὑπερ-φύ-ης*, we follow Buttmann 'Lexil.' ii. 213 in deriving from the rt. *φύ* (No. 417) in the sense of 'over-grown,' 'luxuriant.' There is a different relation of sounds in the evidently reduplicated *πέμ-φιξ* (st. *πεμ-φί-γ*) 'breath' (by the side of *πεμ-φί-ς* *πεμ-φίδ-ος*), which probably belongs to No. 652 (p. 509). We find besides in a few noun-formations like *ὄλι-βρό-ς* by the side of *lubri-cu-ς* (No. 544), *μόλιβο-ς*, *μόλιβδο-ς* by the side of *μόλυβο-ς*, *μόλυβδο-ς* (No. 552) and in a few roots like *λύγ-ο-ς* by the side of *liga-re* (No. 149), *λιφ* by the side of the Lat. *lub-et*, *lib-et* (No. 545) and the Skt. *mid* by the side of *मुद्* (No. 479) a variation between *ι* and *υ* extending beyond the region of Greek, though we cannot, as in the cases discussed on p. 58, explain the variation to be a double series of forms with a differentiation of meaning. The variation between *υ* and *ι* in the derivative termination *-υχο-ς* (*-ιχο-ς*) is discussed by Ahrens 'Rhein. Mus.' xvii. 362, where he treats specially of *Μούνιχο-ς* by the side of *Μούνυχο-ς*, *Μουνιχία*, *Μουνιχίων*, *Μόριχο-ς* by the side of *Μόρυχο-ς* and similar proper names. But I cannot agree with the same scholar in the free use he makes of this change of sound ('Philol.' xviii. 210) in order to explain mythological names. — With reference to the dialectic change of *υ* to *ι* which we meet with in Lesbian Aeolic e. g. in *ἵπερ*, and among the Cyprians e. g. in *ἰμίτραόν* = *ὑπομίτρασον*, we may probably decide that it is a tendency to that Itacism, which finally led the Greeks universally to identify *ι* and *υ* completely. The converse of this change we meet with in the one isolated instance of the Cretan *Υππάγρα*,



‘Υππασιά (‘C. I.’ 2554, 106), which clearly belong to ἵππο-ς (Voretzsch p. 27), though, to be sure, this was a word in which there was originally an *a*.

### I. Vowels prefixed and inserted.

The extreme readiness of the old grammarians to assume that the various vowels had been prefixed or inserted, in order to arrive at desired etymologies, has been replaced by a proportionate disinclination on the part of the linguistic science of the present day to admit the existence of elements which are foreign to the significant body of the word, and owe their existence to convenience of articulation or the preference for certain conjunctions of sounds<sup>1</sup>. In view of the fact that 719 words, when once fixed in form at an early period in the life of language, show no further growth in their significant parts, but rather decay, we shall find good reason to be very careful in making such assumptions. The prothesis of consonants, e.g. of an *s* before consonants of the most different kinds, a process which several good scholars still think is to be allowed, is probably not to be established for a single Greek word. Wherever we find a word with two forms of consonantal initial, one full and the other meagre, we have good grounds for assigning the priority to the former. At the most the only letters that we can call prefixed are the parasitic *g* and *d*, which, as was shown at length above, are produced naturally before *v* and *j* even when initial. This prothesis however, if carefully examined, is really an affection of single consonants. In the middle of a word too auxiliary consonants like the *δ* in *ἀν-δ-ρός*, and the *β* in *μεσ-ημ-β-ρία* are confined to a small circle. It will be readily seen that here too these sounds do not make their way into the body of sound as a foreign element, but are developed as natural neighbours from the preceding sounds, in the effort to connect

<sup>1</sup> Pott ii<sup>2</sup>. 394 says: ‘It needs no great sharpness to explain such vowels as meaningless prefixes.’ But even Pott, though describing the vowel in many cases as ‘obscure,’ now and then acknowledges the ‘possibility’ of prothesis.

these with those which follow. On the other hand the vowels hold in general a more subservient position in language. It is generally recognized that they occasionally introduce themselves at the beginning and in the middle of a word, or, to speak more exactly, result from the semivocalic sound attendant on certain consonants<sup>1</sup>. It only remains to distinguish more exactly the conditions and the range of this phenomenon in Greek, and in so doing to insist that this process is to be regarded as nothing more or less than a purely physical one, and is hence to be explained, like any other of its kind, physiologically.

#### 1. EVOLUTION OF A VOWEL AT THE BEGINNING OF A WORD.

The old grammarians called the prefixing of a sound *πρόσθεσις*. Lobeck uses the word in the sense they attached to it in the discussion in the first chapter of his 'Elementa pathologiae,' 'De prothesi et aphaeresi.' Pott, who discusses this question at length ii<sup>1</sup>. 125 ff. and returns to it ii<sup>2</sup>. 384 f., uses the word *prothesis*, which is more apt, and for this reason we have followed him in so doing, and call vowels thus arising 'prothetic vowels.' The frequency of the phenomenon, espe-

<sup>1</sup> The whole of our present subject is treated with great learning and ingenuity by Joh. Schmidt in his 'Zur Geschichte des indogermanischen Vocalismus' Part ii. He there advocates the use of the Indian term *Svarabhakti*, that is 'fragmentary vowel' ('*Vocalbruch*') 'fraction of a vowel' ('*Vocaltheil*') for the insignificant vowel which is produced by a liquid or nasal, but can develope into an 'independent vowel.' Apart from the fact that the Indians only used this term for a vowel sound developed *after* *r* and *l*, though it is clear that we must treat as one both this and the vowel which is developed before these and other sounds (*Rig-Veda-Prātiçākhja* edited by Max Müller p. xii.) I do not see why we should diversify our grammatical terminology by this outlandish word. '*Vocalentfaltung*' ('the evolution of a vowel') is a more exact and intelligible term for the same thing. It is the translation of the Greek *ἀνάπτυξις*. Cp. Crameri 'Anecd. Oxon.' i. 63. 13 τὸ πρῶν κατ' ἀνάπτυξιν γίνεται πρῶν ἔσθ' ἐν τῷ πινυτή. — In the beginning of a word, at all events, a vowel so produced apparently goes beyond its proper province, which is that of continuous sounds.



cially before double consonants, but also before simple liquids and nasals and before the digamma (p. 578 ff.), is characteristic of Greek and distinguishes it in many cases from Latin. But analogies from related and non-related languages are to be found in abundance. The most familiar instance is the prefixing of a vowel of this kind in the Romance languages, for which see Diez 'Gr.' i<sup>2</sup>. 224 ff. Forms like the Spanish *estar* = *stare*, Provenc. *estable* and *istable* = *stabulum* have precedents in late Latin, according to Corssen (i<sup>1</sup>. 289, ii<sup>2</sup>. 286, 'Ztschr.' xi. 341) since the fourth century: *istatuam*, *ispirito*, *Isticho* = *Sticho*<sup>1</sup>. Diez adduces similar forms with *e* and *i* from Basque and Hungarian, with *y* from Cymric, Pott from Arabic, Persian and Ossetic. On prothetic vowels in Slavonic cp. Miklosich 'Lex.' pp. 1 and 459. Lithuanian too shows forms like *iszkadà* = Germ. *Schade* ('injury'), *iszkalà* = Germ. *Schule* ('school'), and even Vedic Sanskrit: *i-raj-jā-mi* = *rego* (rt. *raj* No. 153), *i-radh* 'seek to win,' by the side of *rādh*. In Armenian an *a* or *e* is evolved before every initial *r* (Hübschmann 'Ztschr.' xxiii. 8). In Ossetic, *a*, the heaviest of all the vowels, is employed for this purpose. Bopp 'Vgl. Gr.' i<sup>2</sup>. 121 quotes several instances in which metathesis has occurred in addition: *artha* 'three,' cp. Skt. *trajas*, *arfug* 'eyebrow,' i. e. Skt. *bhru-s* and the Gk. *ὀφρύ-s* (No. 405) which arose in the same way. In the Sicilian dialect too, as Wentrup ('Beiträge zur Kenntniss der Sic. M.' p. 154) shows, an *a* is constantly prefixed, which, e. g. in *aruta* = Gk. *ῥυτή* is not the remains of a preposition, but must be a purely phonetic element. The two analogies last mentioned have a special interest for the student of Greek, inasmuch as here it is just the fuller vowels *a*, *o* which are used by the side of *ε* as prothetic vowels in preference to others. The Greek forms that

<sup>1</sup> Lachmann on Lucret. 231 shows how this parasitic *i*, corrupted by copyists even into *in*, *hi*, *hy*, and occasionally replaced by *e*, became the source of numerous errors in our manuscripts. Bekker 'Hom. Bl.' i. 134 calls attention to this prothesis with reference to Greek words. Max Müller ii. 194 presents us with many similar phenomena from various sources, specially from Celtic. Cp. Zeuss 'Gr. Celt.' p. 120 and Terrien-Poncel 'Du langage' (Paris 1867) p. 64.

belong here have been especially discussed by Savelsberg and Crecelius in Hoefler's 'Ztschr.' iv., by Christ p. 19, 33, by Leo Meyer i. 220, so that no more than a short review of the subject will be necessary here. Since this kind of vowel arises naturally from the 'voice' inherent in all sonant consonants, the particular shade of the sound, so to speak, is very changeable. Accordingly we have instances of a variation between different vowels, even in one and the same root, e.g. *ἀ-μέργ-ω* and *δ-μόργ-νυ-μι* (No. 151), *δ-σταφ-ί-ς* (Athen. iii. 105) = *ἀ-σταφ-ί-ς* (No. 219), *ἀ-τρύ-ν-ων* 'ἐγείρων' (Hesych.) by the side of *δ-τρύ-ν-ω*, with which Lobeck 'El.' i. 81 connects also the proper names 'Α-τρεύ-ς and 'Ο-τρεύ-ς, which would accordingly mean 'inciter.' Pott ii<sup>2</sup>. 426 suggests 'interritus' (rt. *τρес*) as the meaning of 'Α-τρεύ-ς, which would thus = *ἀ-τρεστο-ς*. Similarly 'C. I.' No. 6280 l. 18 *ἀτρῆες ἀναγκαί*. Related words will be found above at No. 244. There are good grounds for Christ's view (19) that the shade of the prefixed vowel is generally decided by the following one, hence we have *ἀ* in *ἀ-σταχ-υ-ς* (No. 219), *ἀ-σπάλ-αξ* (No. 106), *ἀ-σπαίρ-ω* (No. 389), *δ* in *δ-νο-μα* (No. 446), *δ-μόργ-νυ-μι*, *δ-τρίν-ω*, *ἐ* in *ἐ-χθές* (No. 193), *ι* in *ι-κτί-ς* ('a kind of weasel') by the side of Hesychius's *κτίς*. Similarly in Zend we find occasionally the vowel of the root prefixed to an initial *r*: *i-rith* for *rith*, *u-rud* for *rud* (Schleicher, 'Comp.'<sup>3</sup> 50, Justi 359, 18). It must be admitted though that there is no consistency in Greek, as is shown by *ἀ-μέλγ-ω*, the Aeolic *ἀ-σφι* = *σφι*, *δ-λίσ-θεῖν*, *ἐ-λαχ-ύ-ς* (No. 168).

A prothetic vowel precedes several consonants in the following cases, from which we have excluded all of doubtful etymology. The vowel appears most frequently before groups containing a sibilant, as in *ἀ-σκαρ-ί-ζω*<sup>1</sup> 'hop,' by the side of the synonymous *σκαίρω*, *σκαρίζω* and *σκιρ-τά-ω* (p. 712), *ἀ-σταφ-ί-ς* 'raisin,' by the side of *σταφ-ί-ς* (p. 213), in *ἀ-σταχυ-ς* 'ear of corn' (*B* 148), more commonly *στάχυ-ς*, which must be expanded from the rt. *στα* (Fick i<sup>3</sup>. 820). — On *ἀ-στήρ*, *ἀ-στράπ-τ-ω*, *ἀ-στραπ-ή* by the side of *στεροπ-ή*

<sup>1</sup> *ἀσκαίρω* seems to have come into vogue only from a false reading in Quint. Smyrn. v. 495, where Köchly writes *μέγα σκαί-ρουσι*.



ep. No. 205. — Lobeck 'El.' i. 16 is probably right in regarding ἀστρηνές · δύσθετον, σκαιόν, ὀξύ (Hesych.) as identical 722 with στρηνές for which also, among other meanings, that of ὀξύ is given. If we take 'hard,' 'rough' to be the primary meaning, it becomes probable that *strenui-s* and the words discussed under No. 222, στερεός-s etc., are also related. — The Thessalian name of the starling, ἀ-στρα-λό-s was mentioned at No. 521. — The Homeric ἀ-σπαίρ-ω 'quiver' bears to the later σπαίρ-ω (No. 389), ἀ-σπάλ-αξ 'mole' (Plut.) to σπάλαξ (No. 106) and ἀ-σπάραγο-s 'asparagus' to the Zd. *sparegha* (p. 503) the same relation, that ἀ-σκαρ-ί-ζω does to σκαρ-ί-ζω. — Less evident is the relation of ἀ-σφάραγο-s 'gullet,' 'wind-pipe' to σφάραγο-s 'noise' (No. 156), while the Lesbian Aeolic pronominal forms ἄ-σφι, ἄ-σφε (Ahrens 125) = σφί, σφέ are among the most transparent instances of prothesis. Of entirely the same nature is the *a* of ἄ-σσα = τινά, which comes from an older ἀ-τja (cp. p. 490). Ahrens ('Formenl.' p. 41) has tried to explain the *a* to be the result of a mistake, supposing e. g. ὀποι' ἄσσα to have arisen through a mistaken division of the words from ὀποιά σσα (σσα = τι-α). But this is opposed by the fact that in Attic Greek ἄττα occurs after other vowels as well, e. g. Plato 'Phaedo' p. 60 e δὴ ἄττα, and 'Theaet.' p. 145 c γεωμετρίας ἄττα, and who will believe that a word existing in the Attic period owed its existence to a pure blunder? Even the ancients were so far puzzled by the *ā* that some grammarians felt compelled to write ἄσσα, that is they distinguished the indefinite here from the indirect interrogative only by its special use (Lobeck 'El.' i. 142). To suppose prothesis is the simplest solution of the difficulty. — ἄ-φλαστο-ν is no doubt correctly connected by Fick i<sup>3</sup>. 699 with the Skt. *bhr̥shtí-s* 'corner,' 'edge,' Lat. *fast-ig-ium* and OHG. *brort* 'fore-part of a ship.' — The relation of ὀ-σφύ-s 'hip' to the synonymous Skt. *sphik'* was treated of on p. 699 along with the by-forms ψόα, ψύη 'region of the loins.'

There are at any rate two certain instances of the prothesis of a vowel before the double consonants ξ and ψ. One, it is true, is a borrowed word. Lobeck 'El.' i. 144 says 'ἐξατράπης et ἐκσατραπεύειν, quae in Inscr. et libris

leguntur, excusationem peregrinitatis habent.' Since Hesych. has preserved the form ζατράπης as well, it appears that we have here different attempts to reproduce the foreign initial. According to Benfey ('Altpers. Keilschriften' p. 18) the Persian form was *khshatra-pa-van* 'kingdom's lord;' but it is perhaps the shorter form *khshatra-pā* which underlies the Gk. word (Pott W. i. 228).—The same sound appears before ψ in ἐψία or ἐψία 'game,' along with the Homeric ἐψιάσθαι 'play,' from which we cannot separate ψιάζειν (Hesych.) ψιάδδεν (Aristoph. 'Lysistr.' 1304).

- 723 It is but seldom that a vowel is employed to support a double mute. The only certain instances are ἰ-κτί-ς and ἐ-χθές. The former denotes a kind of weasel, which is called κτί-ς in Hesych., and in the derived adjective κτίδ-εο-ς 'of weasel's skin' (K 458), appears with a consonantal initial. On ἐ-χθές by the side of χθές we need only refer to p. 675. I am inclined also with Fick ('Ztschr.' xxii. 383) to refer ἰ-χθύ-ς (see Bugge 'Bezzenb. Beitr.' iii. 102) with the Lith. žuvi-ς to a st. *ghu* (*ghju*), and perhaps too to connect ἰ-κτί-νο-ς 'falcon' with the synonymous Skt. *cjēnā-ś* (primary form *kjaina*).

Though a mute and a liquid are a favourite beginning for a word in Greek, there are a few cases in which prothesis has taken place. As to ἀ-κρο-ά-ο-μαι (No. 62) and ὀ-κρυ-ό-ει-ς (No. 77) doubt may still be felt. But ὀ-τρην-ρό-ς, ὀ-τρα-λέο-ς, ὀ-τρύ-ν-ω have, as we have shown under No. 244, such unmistakeable by-forms without the vowel that we cannot doubt how their vowel arose. On the other hand we saw on p. 468 that a different origin was more probable for the ἀ of ἀ-τρακτο-ς.—By the side of τρυγη-φάγο-ς 'fruit-eater' are found the by-forms ἀ-τρυγη-φάγο-ς and ὀ-τρυγη-φάγο-ς in Hesych.—ὀ-βριμο-ς in its relation to the rt. βρι we discussed on p. 532. The same vowel initial is shown by the proper names Ὀβριμὼ Βριμῶ, ἡ Περσεφόνη, Ὀβριάρεως = Βριάρεως (Lob. 'El.' i. 80).—The poetical words ὀ-τλο-ς 'sorrow,' ὀ-τλέ-ω 'suffer,' ὀ-τλη-μα and probably Ἀ-τλα-ς too are so near in meaning to the rt. τελ, ταλ (No. 236), that they cannot be separated from them. Of the Skt. rt. *jat* 'bind,' 'strive,' with which Fick i<sup>3</sup>. 730 connects these words



the same cannot be said. The singular word ἀφλοισμός *O* 607, ἀφλοισμός δὲ περὶ στόμα γίγνεται was explained, it is true, in Apollonius's Lexicon, which relied on a reading 'γίνετ' ὀδόντων' to be a sort of noise, but we shall be the more inclined to take ἀφλοισμός to mean 'foam' because φλοῖσ-βος, mentioned at No. 412 e has also this meaning.

While in the words just discussed the two consonants supported by the prothesis of a vowel have both been retained, we can produce a second list in which, though the vowel served the same purpose, it was not able to prevent the loss of one of the two consonants. Here belong rt. ὀδύς (No 290) for ὀδύς, ὀλίσ-θ-άν-ω from the rt. γλῆτ, and consequently to be traced to ὀγλίσ-θ-αν-ω (No. 544), ὀλιβ-ρός which is discussed at the same place. In ἡπανία 'lack,' there is probably a trace of the double consonant preserved in the length of the vowel (cp. Fr. *épée*); which double consonant we probably have in σπάνις (No. 354).

As regards the simple consonants, a prefixed vowel is least to be wondered at in the case of liquids and nasals. 724 It is sometimes even hard to tell which of the two vowels, that at the beginning of the word, or that following the nasal, is the older. The analogy of the related languages<sup>1</sup> however points to prothesis in the following cases: the ε of ἔρημος by ἡρέμα and ἀράμεναι (No. 454), ἐρεύγω (No. 143), ἐρείκω, ἐρέχθω ('Gk. Verb' p. 503), with which Fick i<sup>3</sup>. 742 and the 'Pet. Dict.' aptly compare the Ved. *rikh* 'tear up,' while Froehde 'Ztschr.' xxii. 264 adds also the Lat. *rī-ma* 'chink' (Van. 808), ἐρείπω, which at No. 513 was put with ῥίπτω, ἐρυθρός (No. 306) and perhaps that of ἔρεβος (p. 480), the ὀ of ὀρυγμός by ὠρυγ-ή (No. 508), the ὠ of ὠρυ-ω (No. 523) by ὀρύ-ε-ται. — Before λ there appears a prothetic α perhaps in ἀλέγω (No. 538), certainly in ἀλείφω (No. 340), as also in ἀλί-ν-ειν (ἀλείφειν Hesych.), which is akin to the Lat. *li-n-e-re* and belongs to the forms dis-

<sup>1</sup> Froehde 'Ztschr.' xxii. 263 says truly: 'Among the Greek words beginning with ρ, of those whose etymology is clear there are only a few which had this initial from the beginning, i. e. ῥάπ-νι (No. 511), ῥίζω 'dye' (No. 154).' — The hitherto unexplained ἐρεῖδ-ω Fr. with great probability compares with the Lat. *rid-i-ca* 'vine-prop.'

cussed under No. 541, and in  $\acute{\alpha}$ - $\lambda\acute{\omega}\pi\eta\xi$  (No. 525.)—The root of  $\acute{\epsilon}$ - $\lambda\acute{\alpha}\upsilon\nu$ - $\omega$  (from  $\acute{\epsilon}$ - $\lambda\alpha$ - $\nu\nu$ - $\omega$ , cp. p. 682) comes near to the *la* of the Lat. *lāmina* (Pott ii<sup>1</sup>. 167). The application of  $\acute{\epsilon}\lambda\acute{\alpha}\upsilon\nu\epsilon\iota\nu$  to the working of metals is as early as Homer. But at No. 529 and on p. 551 we saw the root to be  $\acute{\epsilon}\lambda$ .—There is, however, a clearer case of prothesis of  $\acute{\epsilon}$  in  $\acute{\epsilon}$ - $\lambda\alpha\chi$ - $\acute{\upsilon}$ - $s$  (No. 168) with the perhaps related (p. 483)  $\acute{\epsilon}$ - $\lambda\alpha\phi$ - $\rho\acute{o}$ - $s$ , and of  $\acute{o}$  in  $\acute{o}$ - $\lambda\acute{\iota}\gamma$ - $\acute{o}$ - $s$  (No. 553),  $\acute{o}$ - $\lambda\acute{o}\pi$ - $\tau$ - $\omega$  (Hesych.) by the side of  $\lambda\acute{\epsilon}\pi$ - $\omega$  'shell,' perhaps in  $\omega$ - $\lambda\upsilon\mu\pi$ - $\acute{o}$ - $s$  with an Aeolic  $\upsilon$ , if  $\lambda\alpha\mu\pi$  (No. 339) is the root.—Before  $\nu$   $\acute{\alpha}$  introduces itself in the same way in  $\acute{\alpha}$ - $\nu\acute{\eta}\rho$  (No. 422),  $\acute{\epsilon}$  in  $\acute{\epsilon}\nu$ - $\nu\acute{\epsilon}\alpha$  (No. 427), in the latter attended by a peculiar doubling of the nasal; before  $\mu$  we assume a prothetic  $\acute{\alpha}$  in  $\acute{\alpha}$ - $\mu\alpha$ - $\lambda\acute{o}$ - $s$  as in the related  $\acute{\alpha}$ - $\beta\lambda\eta\chi$ - $\rho\acute{o}$ - $s$  (No. 457) and  $\acute{\alpha}$ - $\mu\beta\lambda$ - $\acute{\upsilon}$ - $s$  for  $\acute{\alpha}$ - $\mu\lambda$ - $\acute{\upsilon}$ - $s$ , in  $\acute{\alpha}$ - $\mu\alpha\rho$ - $\acute{\upsilon}\sigma\sigma$ - $\epsilon\iota\nu$  'flicker,' from the same rt.  $\mu\alpha\rho$ , which occurs reduplicated in  $\mu\alpha\rho$ - $\mu\alpha\acute{\iota}\rho$ - $\omega$ ,  $\mu\acute{\alpha}\rho$ - $\mu\alpha\rho$ - $\acute{o}$ - $s$ ,  $\mu\alpha\rho\mu\alpha\rho$ - $\nu\gamma$ - $\acute{\eta}$  (p. 567), in  $\acute{\alpha}$ - $\mu\alpha\lambda\delta$ - $\acute{\upsilon}\nu$ - $\omega$  (No. 457) in  $\acute{\alpha}$ - $\mu\epsilon\acute{\iota}\beta$ - $\omega$  and  $\acute{\alpha}$ - $\mu\epsilon\acute{\upsilon}$ - $\omega$  (No. 450), in  $\acute{\alpha}$ - $\mu\acute{\epsilon}\lambda\gamma$ - $\omega$  (No. 150),  $\acute{\alpha}$ - $\mu\acute{\epsilon}\rho\gamma$ - $\omega$  (No. 151),  $\acute{\alpha}$ - $\mu\acute{\upsilon}$ - $\nu$ - $\omega$  (No. 451), perhaps in  $\acute{\alpha}$ - $\mu\acute{\upsilon}\sigma\sigma\omega$  discussed on p. 546;  $\acute{\epsilon}$  in the pronominal stem  $\acute{\epsilon}$ - $\mu\acute{\epsilon}$  by the side of  $\mu\acute{\epsilon}$  (No. 460), with which may be compared the ModGk.  $\acute{\epsilon}\sigma\acute{\upsilon}$  =  $\sigma\acute{\upsilon}$  (Mullach 'Gr. Vulgarspr.' p. 182); there is, however, the possibility here that  $\acute{\epsilon}$  is a  
725 shortened reduplication-syllable<sup>1</sup>;  $\acute{o}$  in  $\acute{o}$ - $\mu\acute{\iota}\chi$ - $\acute{\epsilon}$ - $\omega$ ,  $\acute{o}$ - $\mu\acute{\iota}\chi$ - $\lambda\eta$  (No. 175), though, as  $\acute{\alpha}$ - $\mu\acute{\iota}\xi\alpha\iota$  (Hesych.) shows, it is sometimes replaced by  $\acute{\alpha}$ , in  $\delta$ - $\nu\omicron\mu\alpha$ , the initial of which was discussed at No. 446. Fick i<sup>3</sup>. 125 connects  $\delta$ - $\nu\omicron$ - $\mu\alpha\iota$  'revile' with the Zd. *nad* 'despise,' with a by-form *nīd* for  $\delta$ - $\nu\epsilon\iota\delta$ - $\acute{o}$  $s$ ,  $\delta$ - $\nu\acute{\iota}$ - $\nu\eta$ - $\mu\iota$  'benefit' with the Skt. *nand* 'rejoice' (causal *nandājā-mi* 'made glad'). We should have to suppose loss of  $\delta$  for both verbs. The middle use, e.g. in  $\acute{o}\nu\eta\sigma\epsilon\alpha\iota$ ,  $\acute{o}\nu\eta\mu\epsilon\nu\acute{o}\varsigma$  and that of  $\delta\nu\eta\sigma\iota\varsigma$  suit the derivation from this root, which is represented in Lith. by *naud-ā* 'gain,' 'produce,' 'goods,' in Goth. by *niut-an* 'enjoy,' 'benefit,' also with a *u*-sound. In the German *geniessen* 'enjoy' and *nutzen* 'benefit' we find the two main meanings of this root again represented by words of similar sound.  $\nu\acute{\eta}\delta$ - $\nu$ - $\mu\acute{o}$ - $s$  the much discussed epithet of sleep in Homer has often been connected with the rt. *nand*;

<sup>1</sup> Windisch denies both and regards  $\acute{\epsilon}\mu\epsilon$  as identical with the Skt. *āma* 'this' (cp. *amā* 'at home,' *amāt* 'from the neighbourhood').



this is probable, and the word would thus mean 'cheering.' There are difficulties, however, presented by *δνειαρ*, the *ι* of which has not been explained (cp. on No. 279). For this reason I am still doubtful about it. Gust. Meyer 'Praesensst.' p. 42 and Leo Meyer ('Ztschr.' xxiii. 58) start from the rt. *van* (Goth. *vun-an*) 'rejoice.' In that case there would be no prothesis.—On the subject of prothetic vowels before a digamma we need only refer to p. 578<sup>1</sup>.

It cannot altogether be denied, however, that prothesis occurred before explosives as well. We regarded it as certain in *ἀ-κινάγ-ματα* (p. 490) the intermediate form between the rt. *κι* and *τινάσσω*, doubtful in *ἀκούω* (No. 64). In the case of *ὀ-κέλλω*, mentioned under No. 48 and almost synonymous with *κέλλω*, it is conceivable that the vowel arose from the prep. *ἀνά* transformed in Aeolic fashion to *ὀν*.—Before *γ* prothesis of an *ἀ* seemed to us probable in *ἀ-γαν-ό-ς* and the related words (No. 122), while we explained the *ε* of *ἐ-γερ* (No. 139) to be a mutilated reduplication. Whether *ὀχεά*, *ὀχεή* 'hollow,' which occurs in the Alexandrian writers, is really, as old etymologists supposed, the same word as *χειά* (No. 179), may be left uncertain.—But before *δ* prothesis can hardly be denied in *ἀ-δαγ-μός-ς* 'itching' along with the verb *ἀ-δαξ-έ-ω* by the side of *ὀ-δάξ-ω*, *ὀ-δαξ-έ-ω*, the relationship of which to the rt. *δακ* (No. 9) is confirmed by the glosses in Hesychius *ὀδάξει· τοῖς ὀδοῦσι δάκνει, ὀδαξισμός· τρισμός ὀδόντων* (cp. p. 64). In *ὀ-δάξ* 'mordicus' also the primary meaning of the root is evident.—The same assumption is made by Schleicher ('Compend.'<sup>3</sup> 77) for *ὀδοός* (Aeol. plur. *ἔδοντ-ες*). We put the word under the rt. *ἐδ* at No. 289.—We may probably place in the same list *ὀ-δύρ-ομαι* by the side of *δύρομαι, πᾶν-δύρ-τος* (trag.).—The grammarians quote *ἄδορο-ς* in the sense of 'leathern bottle' (*δορό-ς*) from Antimachus. Pott ii<sup>2</sup>. 394 is wrong in saying that Suidas takes the word to mean 'untanned.' On the contrary Suidas himself mentions the meaning *κώρυκος*, and the added *ἄδορον· τὸ ἀνέκδαρτον* does not mean 'untanned' (*ἀδέψητος*) but 'not taken off.' In such an isolated word I regard the origin of

<sup>1</sup> To these may be added *ἀ-εμμα· ἱμάτιον* Hesych. from the rt. *fes* (No. 565, Knös 104).

the vowel in the preposition  $\acute{\alpha}\pi\acute{o}$ , which well suits the meaning, as not impossible. Compare the Cyprian compounds with  $\acute{\iota} = \acute{\upsilon}\pi\acute{o}$  given on p. 718. — It is not yet clear what is the relation between  $\acute{\epsilon}-\theta\acute{\epsilon}\lambda-\omega$  (the only form in Homer) and  $\theta\acute{\epsilon}\lambda-\omega$ , since we do not know what the root of the word is. The most probable of the conjectures about it is that of Pott ii<sup>2</sup>. 401, W. ii. 1 339 (cp. Fulda 'Untersuch. üb. homer. Sprache' i. 237, Fick i<sup>3</sup>. 633), that  $\acute{\epsilon}\theta\epsilon\lambda$  corresponds to the Skt. *dhar* 'hold' in the sense of 'sustinere,' 'hold to,' 'attach oneself to' something. The Skt. *dhar*, acc. to the 'Pet. Dict.' means, with a dat. or acc. of the thing, or with the inf., 'undertake,' 'begin,' the part. *dhṛ-tá-s* 'ready.' And  $\acute{\epsilon}\theta\acute{\epsilon}\lambda\epsilon\upsilon\nu$  as opposed to  $\beta\acute{o}\upsilon\lambda\epsilon\sigma\theta\alpha\iota$  does denote a fixed determination (cp.  $\Phi$  177). In that case here too the  $\acute{\epsilon}$ , unless it is the remnant of a reduplication, would be simply prothetic. —  $\acute{o}\beta\epsilon\lambda\acute{o}-s$  (cp. p. 483) is of too obscure etymology to allow of an opinion about the  $\acute{o}$ .

We see from this review of the subject that  $\tau$ ,  $\pi$ , and  $\phi$  are not numbered among the consonants before which this phenomenon appears, these letters being very common and favourite initials. But prothesis is in general extremely rare before explosives, for which reason we may have somewhat to reduce the list just given<sup>1</sup>. To take refuge in the view that such vowels are the remains of mutilated prepositions seems to me allowable only when this is rendered probable in some individual instance both by sound and meaning. In general apocope of disyllabic prepositions is confined to Aeolic and Epic Greek. We see too from the care with which the nasal of the prep.  $\acute{\epsilon}\nu$  is preserved how reluctant the language was as a rule to neglect the principle of intelligibility in formations of this nature.

## 2. EVOLUTION OF A VOWEL WITHIN THE WORD.

That vowels have been inserted is also an assumption which the comparative study of languages makes us slow

<sup>1</sup> Brugman 'Stud.' vii. 214 prefers, in a number of the cases given above, to regard the vowel as a mutilated reduplication. But it is very rare to find  $\alpha$  and  $\circ$  used in forms where reduplication is established.



to accept. But it is impossible to deny the fact altogether. Pott ii<sup>1</sup>. 223 has discussed a number of undoubted cases from 727 various languages, Heyse ('System der Sprachwissenschaft' p. 220), Leo Meyer i. 221 and again 274 give shorter collections. The subject is discussed at greater length by Walter 'Ztschr.' xi. 428, xii. 375, 401 ('Vocaleinschiebung im Griechischen'). Lobeck in his treatise 'De parectasi' ('Elementa' i. 403) has investigated much that belongs here from a purely Greek point of view. The most exhaustive treatment is now that above mentioned by Joh. Schmidt 'Voc.' ii., particularly p. 307 ff. where vowel-evolution is brought into close connexion with vowel-lengthening<sup>1</sup>. In the case of insertion there is less relaxation than in that of prothesis of the rule that the phenomenon occurs only in the neighbourhood of *r*, *l*, *n*, *m*. Properly speaking insertion, as we saw, is a further unfolding of the 'voice' which is heard in the so-called sonant sounds, and which also generated prothetic vowels before them. To the same source is due the frequency of metathesis in the case of the same sounds, and the fact that in some languages it is possible for *r* and *l* themselves to be regarded as vowels. Hence too the insertion of a short *e* after *r* which has to a large extent become a rule in Zend: *hware* 'sun' = Skt. *svar*, *dadareça* = Skt. *dadárça*, Gk. *δέδορκα* (Bopp 'Vgl. Gr.' i<sup>2</sup>. 55), and it is a fact connected with this that a Skt. *r* is represented as a rule in Zend by *ere*, which latter group of sounds Justi p. 357 actually gives as a vowel, lengthened into *are* and further into *āre*. As instances of the anaptyxis that is not uncommon in modern Greek we may take *δραχμή* = *δραχμή*, *πάτριμος* = *πάτριμος*. Numerous analogies for Greek are to be met with in the Italian languages. The most consistent is Oscan, as Kirchhoff 'Ztschr.' i. 36 ff. shows in his excellent essay 'Vocaleinfügung im Oskischen.' We need here only refer

<sup>1</sup> There has just appeared Fick's essay 'Schwa indogermanicum' in Bezenb. 'Beitr.' iii. 157 ff., which traverses ground contiguous to this. Still the author distinguishes between his 'schwa' and a 'fractional vowel' ('*Theilvocal*'). Here too we find discussed from a different point of view much that we have treated above p. 710 ff. under the head of vowel change,—whether profitably or not I leave others to decide.

to forms like *Al-a-faternom* = *Alfaternorum*, *ar-a-getud* = *argento*. Kirchhoff shows that Oscan, in these cases of real insertion, assimilates the inserted vowel to the preceding one, while in another class of forms, in which the moveable vowel sometimes assumes a privileged position, e. g. in *pū-tereī* 728 by the side of *pū-turu-s* = *πότερο-s*, the influence of the following syllable is to be traced, and that with a consistency greater than that which we discovered on p. 721 in the case of prothetic vowels in Greek. Kirchhoff gives a copious selection of analogous processes from Old-High-German, like *al-a-h* = Goth. *alh-s*, *pur-u-c* = Goth. *baúrg-s*, *far-a-h* = Lat. *porc-u-s* (No. 104). From the corresponding later forms we perceive that such vowels come to the surface and disappear periodically in the history of language. On the tendency of Old-Latin to assist the pronunciation of unusual groups of consonants by means of inserted vowels, we may refer to forms like *Aesc-u-lapiu-s* = *Ἀσκληπιό-s*, *Proc-i-na* = *Πρόκνη* and to the full discussions of Ritschl 'Opuscula' ii. 469 ff. and Corssen i<sup>1</sup>. 253, 258, ii<sup>2</sup>. 77 f., and on similar insertions in Irish to Windisch 'Kurzgef. Ir. Gr.' § 78.

The vowels most frequently used for this purpose in Greek were *α* and *ε*, more rarely *ο* and *ι*, and most rarely of all *υ*. The following are certain instances of insertion. In drawing up the list no distinction has been made between cases in which the insertion can be established by the comparison of other Greek forms and those which only betray it when compared with words taken from other languages. It is moreover not always possible to decide which was the original position of the vowel. — Either before or after *ρ* there appears an inserted vowel in *ἀρ-α-βύλας* (Hesych.) by the side of *ἀρβύλαι γένος ὑποδημάτων* probably from the same stem as *ἀρπ-ιδ-ες*, used in a like meaning by Callim. ('E. M.' 148, 39), and accordingly belonging to *ἀρ-π* (No. 488), *ἀρ-ά-χ-νη* compared with *ἄρκ-υ-s* (No. 489 and p. 502), *ἀρηνο-βοσκό-s* (also *ἀρενοβοσκό-s*<sup>1</sup> and

<sup>1</sup> On *ἀρενοβοσκό-s* in Hesych. doubt is thrown by its place in the alphabetical arrangement. The form with the long vowel is stated by the same authority to have stood in Sophocles 'Tyro' with the variant *ἐρρηνοβοσκό-s*. Nauck 'Philol.' vi. 389 quotes from Eustathius p. 799, 36 a fourth form *ἐρενοβοσκό-s* but does not believe in any of the four.



ἐρρηνοβοσκός), where in accordance with the views expressed under No. 496 we must hold either the first or the second vowel to be of later developement, Ἄρ-ε-πνῖαι by the side of Ἄρπνναι ('E. M.') cp. No. 331, ἄρ-έ-τησαν ἤρμσαν, with which too should be compared ἄρ-ε-τή and other forms mentioned under No. 488, ἄρ-ι-θ-μός and νήρ-ι-το-ς belonging to the same root, and ἄρ-ι-μάζει = ἄρ-μόςζει (Hesych.), β-ά-ραγχο-ς given in the 'E. M.' from Hipponax and βαραγχιᾶν mentioned as a common Attic by-form of βραγχιᾶν 'to be hoarse' (Lobeck 'El.' i. 404), to which too belongs βράγγχα τὰ βράγγχα τῶν ἰχθύων, βαρραχεῖν ἤχεῖν, σκιρτᾶν (Hesych.) with doubled ρ (cp. ἐννέα), in its first meaning not to be separated from βραχεῖν, δ-ά-ρυνλο-ς Macedonian for δρῦ-ς and given along with it under No. 275, ἐρ-έ-β-ινθο-ς and 729 ὄρ-ο-βο-ς (No. 494) by the side of *er-vu-m* and the OHG. *ar-a-weiz* also with an added vowel. Perhaps too the Cretan Ῥαβίνθιο-ς, the name of a month, belongs to the same root (Ahrens 'Rhein. Mus.' xvii. 351). ἐρ-ε-τ-μός we referred under No. 492 to a rt. ἐρ; θ-ό-ρυν-βο-ς was connected under No. 317 with θρῦ-λο-ς; κ-ά-ρραξον Πάφιοι κράξον (Hesych.) bears exactly the same relation to κράξον that βαρραχεῖν does to βραχεῖν, and on this account M. Schmidt is certainly wrong in suspecting the word. ὄρ-έ-γ-ω stands by the side of the Skt. *arj*, ὄρ-ό-γ-νιᾶ by the side of ὄργ-νιᾶ (No. 153). On ὀρώρ-ε-ται I may now refer to 'Gk. Verb' p. 417. To the same root again (No. 500) belongs ὄρ-ο-θ-ύν-ω; and if we compare ὄρ-ῖ-ν-ω with ὄρ-νν-μι it seems natural to explain the *ι* to be a vowel, the lengthening of which is only compensatory. ὄρ-ῖ-ν-ω comes either from ὄρ-ι-νῆω (cp. βαίνω) or from ὄρ-ι-ννω (cp. τί-νω by the side of τινύω). σκάρ-ῖ-φο-ς by the side of σκαρφ-ίον and κάρφ-ιον and κάρφ-ο-ς were mentioned on p. 694, στέρ-ι-φο-ς at No. 222; the relation is precisely the same between the common form τάρ-ι-χο-ς 'salt meat,' whence ταρ-ι-χ-εύ-ω, and ταρχ-ύ-ω (Lobeck 'El.' i. 463), which belong no doubt to the rt. *τεpc* (No. 241) 'to dry,' and have lost one ρ assimilated from σ. In τράσσω too ('Gk. Verb' p. 222) the vowel has passed into general use, though it is wanting in the noun τάρχη, τάραξις, while θράσσω, τέτρηχ-α are due to syncope (Joh. Schmidt 'Voc.' ii. 314). At p. 100 he refers

τάρ-ι-χο-ς to the rt. *θαρχ* = Teut. *drug* ('dry'). Still the *ι* is anaptyptic all the same, so too, probably, in *ἐρείκη* 'heath,' 'heather.' The word corresponds strikingly with the OIr. *froeck* f. 'heath,' 'heather,' primary form *\*vraikā*. Apparently we must assume a Gk. *Φερείκη*. Cp. Windisch 'Stud.' vii. 379, Stokes 'Beitr.' viii. 351. The Tarentine *τορ-ό-νο-ς* = *τόρνο-ς* 'circle' (Hesych.) belongs to a class of similar formations which were mentioned with *τέρ-ε-τρο-ν* under No. 239. Completely analogous is the Aeol. *φερ-έ-να*, or, as Lehrs on Herod. 'π. μον. λεξ.' 33, 30 writes, *φέρ-ε-να* for *φερ-νή* 'dowry' (No. 411). — Before *ρ* a similar *ε* is produced in the Aeol. *μέτ-ερρο-ς* = *μέτρ-ιο-ς*, *Πέρραμο-ς* = *Πρίαμο-ς* (Ahrens 55), in *\*οίκτηρο-ς*, which is to be deduced from *οίκτηίρω* (by the Old Attic *οίκτηίρας*), *α* in *\*έχθ-α-ρο-ς* to be deduced from *έχθαίρω* ('Gk. Verb' p. 255).

Before or after *λ* we find an inserted vowel almost as often. Here belong *άλ-ε-γεινό-ς* and *δυσ-ηλεγ-ής* 'hard,' Schaper 'Ztschr.' xxii. 515 by *άλγ-ος* 'pain,' a word of obscure origin, since it is very doubtful whether it is related to *άλέγ-ω*, discussed under No. 538, and not more than possible that it is related to the Lat. *alg-or*, *alg-us* (cp. τὸ δέ τοι καὶ ῥίγιον ἔσται and Fulda 'Untersuch.' i. 221), and also rt. *άλ-ε-Ξ* (No. 7) by the side of *άλλκ* and the Skt. *raksh* along with the related *άρ-ή-γ-ω*, referred to also on p. 533. Perhaps too *άλ-ι-κίνο-ς* *δυνατός* in Hesych. belongs here; it seems to be a mistake for *άλ-ί-κιμο-ς*, i. e. *άλλκ-ι-μο-ς*. *άλ-ω-φό-ς* *λευκός* according to Hesych. and its compound *άλωπόχρους* are rightly explained by Savelsberg 'Rhein. Mus.' xxiii. 384 to be from *άλ-φό-ς* (No. 399), and he points out a similar insertion in  
730 the Osc. *Al-a-faterna*. The long vowel is as in *άρήγω*, *σκάριφο-ς*. Further with Lobeck 'El.' i. 31 we may add *αστέλ-ε-φος* τὸ περὶ τὴν κιθάραν δέσμα (Hesych.) by the side of *στέρφ-ος* 'skin,' and here we should also have to suppose the initial vowel to be of later date and *ρ* and *λ* to have been interchanged. *έν-δελεχ-ής* and *δολιχ-ό-ς* with the Skt. *dīrghá-s* have been discussed under No. 167, *δάγκ-ο-λο-ν* on p. 621. We treated of the relation of *ήλ-α-κ-άτη* to the rt. *άρκ* under No. 489, that of *ήλ-υ-θ-ο-ν* to the rt. *έλ* = *ép* on p. 556, *έρ-υ-ς* (*έρύω*) by the side of *φερ-ς* at No. 497 b, that of *ήλ-ι-τ-ο-ν*,



ἡλ-ί-θ-ιο-s to the rt. ἄλ on p. 557. κ-έ-λαδ-ο-s 'noise' and κελαδεῖν are compared, perhaps rightly, by Fick i<sup>3</sup>. 541 with the Skt. *krad*, *krand* roar, 'neigh,' 'bellow.' κολ-ε-κ-άνο-s, κολ-ο-κ-άνο-s, κολ-ο-σσό-s come, as was shown under No. 67, from a st. *kark*, μαλ-α-κό-s is, as we saw under No. 457, the softer form for Hesychius's μαλκό-s. The ο of μ-ό-λυβο-s and the related forms was seen under No. 552 to be inserted. παλάσσω 'sprinkle' comes from a primary form παλ-α-κ richer by a vowel than the related περκ (No. 359 b). The same origin was conjectured under No. 367 for the ε of πέλαγ-ος. It is clear that insertion has taken place in the forms πέλ-ε-κ-υ-s (No. 98), which agrees remarkably with the Skt. *para-*ξύ-s, Hom. ἄ-π-έ-λε-θρο-s 'immeasurable' and π-έ-λε-θρ-ον by the side of πλέ-θρο-ν (No. 366), and in σκάλοψ, σπάλαξ, ἀσπάλαξ (No. 106). Aristoph. said Τελ-ε-μησσης (Meineke 'Com.' ii. p. 1159) instead of Τελμησσεις, τολ-ύ-π-η 'clue' we regarded as an expansion of the rt. ται (No. 236) by means of a determinative π, χ-ά-λαζα was discussed under No. 181, ψηλ-α-φ-ά-ω 'feel' is connected, probably rightly, with the rt. ψαλ ψάλλειν by Walter 'Ztschr.' xii. 406, who also compares the Lat. *pal-p-are*; perhaps the original form of the root was *spal*, and we might even imagine a connexion with the OHG. *spil-ō-n*. In this way we should be brought to a connexion with No. 389.

Far smaller is the number of words of this class that have a nasal in their stem. In the case of ἄν-ε-μο-s (No. 419) the comparison of the Indian verbal form *án-i-mi* is important, in ἄφ-ε-νος by the side of ἀφνειός (p. 510) the φ points to a time when the labial stood immediately before the ν. Still we may compare τέμ-ενος (No. 237) and the Lat. *fac-inus*. How the ε of ἄν-ε-μο-s is related to the α of πλόκ-α-μο-s, ποτ-α-μός cannot be decided without a comprehensive investigation into such internal vowels in the formation of stems. In ἄν-ήνο-θε, ἐν-ήνο-θε (No. 304) the vowel takes its place between the primitive root and the root determinative, as in ἡλυ-θ-ο-ν, as too in καν-α-χ-ή, κόν-α-βο-s (rt. καν No. 32). The vowel has however made its way into the root itself in κ-ο-νί-s 'nits' (No. 285) from the rt. *knid*, in όν-υ-χ from the rt. 731 *angh* (No. 447), in π-ι-νυ-τός from the rt. πνυ (No. 370), a

long vowel (cp. *σκάφ-ῖ-φο-ς*) in *σκ-η-νίπ-τειν*, *διασκηνίπτειν* 'to hug the wind,' which Lobeck 'Path.' 432 is no doubt right in connecting with *σκνιπός* whose initial is discussed on p. 703. — *τέμ-α-χ-ος*, with which Walter aptly compares *μίαχος* (*μίασμα* Hesych., No. 237), comes, along with *τμή-γ-ω*, softened from *τμη-κ-ω*, from a rt. *τμα-κ* expanded by a *κ*, and so the *α* stands here too as a mediatory vowel. We may finally class here *Τμάρο-ς* and *Τμῶλο-ς*, names of mountains in Thesprotia and Lydia, which have the by-forms *Τ-ό-μαρο-ς* and *Τ-ύ-μωλο-ς* (Lobeck 477).



Throughout the whole of our extensive investigations we have made a point of bringing into prominence the persistent tendency which, in spite of the multiplicity and variety of phonetic change, pervades the whole history of language, and puts it within our power to establish definite relations between the sounds of Greek and those of the related languages. Not only in the regular substitution of sounds, which we dealt with in the second book as the main and fundamental law of the Greek language, but also in the isolated exceptions to this law which we had to notice in the third book, we recognized at p. 409 one and the same *fundamental tendency*, that of '*weathering away*,' which on closer inspection was found to consist in a decrease of energy in the attempt to pronounce certain sounds. But alongside of those phonetic transformations which, like softening, dulling, and complete loss of sounds, were the simplest result of the above-mentioned fundamental tendency, and on this account admitted of being regarded as normal, we found others besides, which at first looked abnormal, and inconsistent with this tendency. First among these comes the *reciprocal influence* of sounds on each other, owing to which, inasmuch as the stronger sound occasionally assimilated the weaker more or less to itself, there certainly arose the possibility of a strengthening as well. But a strengthening of this kind, if closely examined, is only apparent, since it is due to the inability to produce completely the particular sound originally intended, owing to the difficulties caused by the neighbouring sounds. To the same class belongs further the birth of the subsidiary or parasitic sounds. Since a really strong articulation excludes these subsidiary sounds, this process too depends on a certain relaxation of the vocal organs. As we have arranged the matter of our investigation according to the separate sounds, I will take the opportunity of giving here, at the conclusion, a comprehensive *resumé* of the whole, from the points of view

just discussed. Ludwig Lange (now my valued colleague)<sup>1</sup>, in his review of the first edition of this work ('Ztschr. f. d. 783 österr. Gymn.' 1863 p. 295) justly pointed out the want of a general survey, and drew up one of his own which I here adopt in many of its items. The regular sound-changes (Bk. ii.) will be found in spaced, the sporadic (Bk. iii.) in ordinary type.

#### I. NORMAL CHANGE OF SOUND.

##### A. Relaxation of articulation.

1. Weakening of the tenuis to the medial p. 533.
2. Dulling of harsh groups of consonants p. 691 f.
3. Substitution of the hard aspirate for the more difficult soft one p. 424.
4. Change of *m* into *n* and the reverse p. 543.
5. Change of *r* to *l* p. 547.
6. Change of *s* into *h* before vowels pp. 375, 392, 412 f.
7. Change of *j* into *h* p. 396.
8. Change of *v* into *h* p. 413.
9. Interchange of the sharp and weak breathings pp. 682 ff.
10. Change of *v* into *u*, *o*, *ω* pp. 563 ff.
11. Change of *j* into *i* or *ε* pp. 606 ff.
12. Dulling of *a* into *ε* and *o* p. 90.
13. Weakening of *a* into *i* pp. 711 ff.
14. Weakening of *a* into *u* pp. 713 ff.
15. Weakening of *u* into *i* pp. 716 ff.

##### B. Complete loss of sounds.

1. Loss of a consonant pp. 429 ff., 692.
2. Dropping of the breathing pp. 524 ff.
3. Loss of *s*, *v*, *j* pp. 94, 416.
4. Disappearance of a nasal pp. 53, 531.
5. Loss of a vowel pp. 45, 572.

#### II. ABNORMAL CHANGE OF SOUND.

##### A. Through the influence of neighbouring sounds.

1. Hardening of *f* to *β* p. 583.
2. Hardening of *f* to *φ* p. 600.

<sup>1</sup> [Dr. L. Lange's death followed within a fortnight, that of the author of this work in the early autumn of this year, 1885.]



3. Change of  $f$  to  $\mu$  pp. 589 ff.
  4. Change of  $f$  to  $\rho$  p. 455.
  5. Hardening of  $j$  to  $\gamma$  pp. 612 ff.
  6. Assimilation of  $\lambda j$ ,  $\rho j$ ,  $\nu j$  to  $\lambda\lambda$ ,  $\rho\rho$ ,  $\nu\nu$  p. 664.
  7. Change of  $\tau j$ ,  $\theta j$ ,  $\kappa j$ ,  $\chi j$  to  $\sigma\sigma$  ( $\tau\tau$ ) pp. 665 ff.
  8. Change of  $\delta j$ ,  $\gamma j$  to  $\zeta$  or  $\delta\delta$  pp. 669 ff.
  9. Change of  $\pi j$  into  $\pi\tau$  pp. 497, 676 ff. 734
  10. Change of  $\chi j$  into  $\chi\theta$  pp. 499, 675 ff.
  11. Change of  $\lambda$  into  $\nu$  p. 450.
  12. Change of  $\sigma$  into  $\rho$  p. 452.
  13. Metathesis pp. 653, 678 ff.
  14. Dissimilation of various kinds pp. 706 ff.
- B. Through the generation of parasitic sounds.
1. Change of  $k$ ,  $g$ ,  $gh$  into  $kv$ ,  $gv$ ,  $ghv$ , and further into  $\pi$ ,  $\beta$ ,  $\phi$  (Labialism) p. 456.
  2. Change of  $k$  and  $g$  into  $kj$ ,  $gj$ , and further into  $\tau$ ,  $\delta$  (Dentalism) p. 485.
  3. Change of  $v$  into  $gv$ , and further into  $\gamma$  pp. 442, 596.
  4. Change of  $j$  into  $dj$ , and further into  $dz$  ( $\zeta$ ) and  $\delta$  pp. 623 ff.
  5. Production of a  $j$  after other consonants pp. 497, 661 ff.
  6. Aspiration of an unaspirated explosive p. 500.
  7. Production of auxiliary vowels pp. 578, 718 ff.
  8. Production of auxiliary consonants p. 719.

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The following may be taken as a summary of the leading principles which should guide the etymologist.

1. Etymology seeks to arrive at the primary idea of a word, and proceeds by a continual abstraction of formal elements which express relation, until it finds the ultimate agglomeration of sounds.

2. These ultimate significant agglomerations of sounds, the formless matter of speech as it were, we call roots. We assign a real existence to roots, assuming that before the development of the formal element in language roots were the real words of language, and that even in a later stage

the root presented itself more or less clearly as the common kernel of many connected words, to the consciousness of those who used them.

3. Inasmuch as we can distinguish sounds of various kinds, added to these roots, which, though by no means firmly attached, still do not belong to the formal elements of language, we make a distinction for the family of languages with which we have to deal, between *primary* roots, i. e. such as have no such added sounds, e. g. *ju*, and *secondary* ones expanded by these same elements, e. g. *judh*. These amplificatory sounds, which limit the meaning of the root and thus define it more sharply, we call *root-determinatives*, e. g. the *dh* in *judh*. The expansion of primary roots by determinatives falls for the most part into an early period of language.

735 4. The highest and last task for the etymologist, the tracing of the whole of the words of a language to their roots, can only approximately be fulfilled, and necessitates various preliminary labours. There is no mistake which entails a heavier penalty upon the etymologist than too great haste in referring a word to its root.

5. One of the most indispensable preliminaries for the discovery of roots is the comparison of the words of a language with those whose relationship to them can be established by sound and by meaning. This process is as it were the marshalling of our troops.

6. In marshalling thus our array we must not limit ourselves in the case of the Indo-Germanic languages to a single language. As it has been proved that these languages possessed before their separation a multitude of words, stamped with definite individuality of sound and meaning, the family history of the several languages extends back to the time when no separation had as yet taken place. In marshalling Greek words then each word must be classed with those words, both in Greek itself and in the cognate languages, which a careful balancing of probability shows to be related to it.

7. As the result of this comparison we attain to the Indo-Germanic *primary form* of a word, and in many cases to the root, which is common to the different languages, and to which each of them has given a special form. This com-



parison however possesses a value of its own apart from the attainment of this last result (cp. p. 80).

8. Relationship is established between words in a language or in kindred languages when their *sounds* and their *meaning* can be shown by direct evidence or demonstrable analogies to be equivalent.

9. The sounds of a language stand to those of the related languages in a relation *which can be accurately determined*. Greek sounds especially are subject to phonetic laws and tendencies, and attention to these is the first and inviolable rule in all attempts at etymology.

10. It is in many cases more difficult to determine the course of the change of *meaning*. Still we have found some guiding analogies and certain courses of language even here. First of all it is clear that language always started from definite perceptions, not from vague generalities, and that the mental power which forged man's speech comes nearer to the poet's fancy than to the logician's abstraction. For the rest, the science of etymology is still in the experimental stage as regards the transition of meaning. For the present at any rate what we have to rely on mainly here, as in the greatly similar case of textual criticism, is a judgement formed by the devoted study of richly developed languages, and in the case of Greek etymology on intimate acquaintance with Greek and its nearest kin Latin. This is a part of linguistic investigation which Classical Philology can least of all afford to hand over to the general or comparative science of language. — The only course open to the individual investigator, in respect to such languages as he has not mastered in the same degree, is to rely on the most trustworthy statements of others. The German however has a specially fruitful field open to him in the usages of his own rich language, with which he is personally and directly familiar.

11. It is of great importance that, in dealing with the meaning of words, what is actual should be distinguished from what is merely conjectural. That *λύκο-s* and *lupu-s* both mean 'wolf' is a fact, which, considering the near relationship of the two languages, proved for us in other ways, is an argument of much weight for the original identity

of the two words. As to the primary idea to be attached to the word we have only conjectures. The etymologist must be very careful not to set down an idea, which at most *might* be the fundamental meaning of the word, for that which actually *was* its fundamental meaning.

12. A conjectural primary idea or meaning — in the example above given 'shining one' — must *not* be received if it is derived from the *one language alone*, but only if it suits all the words, whether in that, or in related languages, which a sound method of investigation shows to be connected — and in the example given this is *not* the case.

13. Actual substantial agreement in meaning, that is, in the object denoted by the words, warrants us, in case a strict examination shows the sounds to agree, in pronouncing words of related languages or dialects to be related, in this instance λύκο-s to be related to the Skt. *vfka-s*, ChSl. *vlūkŭ*. Whether or not we arrive at once, or arrive at all, at an etymon as the result of this comparison is a question by which the comparison itself is not affected in the least.

14. For this very reason words of a clear stamp, which denote external objects, in so far as the *one* point — their actual meaning — is clearly determined, are better adapted to be the foundation for difficult phonetic investigation, than roots and words of a more metaphysical character, which on this account are harder to grasp and may be suspected of coming from a different source.

15. In these questions we must meanwhile never lose sight  
737 of the fact, that language *may* have arrived by very different ways at the name for an object, and for this reason, in cases where the sounds admit of combination with more than one other family of words, the connexion of two words is very often the result of much consideration, and the choice lies between various rival possibilities.

16. We can here always find in what is evident some help to the decision of what is doubtful. Hence it becomes possible, particularly according to the verdict of *Analogy*, to get the vocabulary of a language gradually into order, and to put each word side by side with its kin in the related languages. For the explanation of proper names, whose meaning does not at



once strike the reader, we have more than ordinary need of the analogy of definite, unmistakeable, and soundly analysed words.

17. All Etymology must start from the recognition of the fact that language was *rich* and developed in manifold ways at a very early period. Hence it is as foolish to assume a scanty provision of primitive sounds as to suppose that there were only a limited number of primitive ideas or but a small circle of primitive suffixes. We should therefore do far more wisely in doubtful cases to leave asunder provisionally what possibly has no connexion, than to be in too great a hurry to connect words on account of a slight resemblance.

We conclude with the saying of Epicharmus, which every etymologist would do well to lay to heart :

*νάφε καὶ μέμνασ' ἀπιστεῖν, ἄρθρα ταῦτα τῶν φρενῶν.*

## ADDENDUM.

The more noteworthy of the supplementary comparisons of Greek and Keltic words added by Stokes in 'Beitr.' viii. 351 are the following:—

*ἄρδης* 'point of a stake,' 'prong,' Ir. *aird* 'corner-point.'

*γοργός* 'vehement,' 'savage,' OIr. *garg* 'fierce' (Windisch. 'Ztschr.' xxi. 395).

*λεχρός* 'dry,' 'lean,' Ir. *sesc*, Cymr. *hysp* 'dry,' 'barren;' also Ir. *sescen* 'bog,' 'moor' (as being barren). Cp. Fick i<sup>3</sup>. 799, who also connects the Lat. *siccu-s*.

A remarkably isolated word is the OIr. *cinteir* (Sg. 50<sup>a</sup>) Armen. *quentr* 'calcar;' it is certainly connected with the Gk. *κέντρον*, and appears to be Old Keltic (for at Z<sup>2</sup>. 781 the *Centrones* are rightly compared), but an original *ent* always became *ét* in Irish (e. g. Ir. *cét* = Lat. *centum*). Stokes starts from a primary *cent-tri*, but it is not clear that this could become *cinteir*. Is there any help to be got from the Vedic *ṣnath* (*ṣnathati*, *ṣnathajati*) 'break through,' 'pierce?' Cp. Fick i<sup>3</sup>. 546. In that case the Irish *cent-* might be a metasized *cnet*.

*λόγχη*, OIr. *laigen* 'lance;' *Laigin* (nom. pl.) the inhabitants of Leinster (Fick ii<sup>3</sup>. 216).

*μάταιος*, OIr. *in-made*, *in-madæ* 'sine causa' Z<sup>2</sup>. 609 (*in* is in Old-Irish prefixed to form adverbs).

*μέμφομαι*, OIr. *mebul* 'disgrace.'

*ούτάω* 'wound,' *ώτειλή* 'wound' (Fick i<sup>3</sup>. 769) may very well be connected with the OIr. *foth*, acc. pl. *futhu ocus airde cruche* 'stigmata et signa crucis' Z<sup>2</sup>. 1005; it is more doubtful perhaps whether it is also connected with *co fotheasa* Gl. to 'nec hoc dico quo praecessores meos mordeam' Ml. 3<sup>a</sup>.

*τητάω* 'lack' (mentioned under No. 221), OIr. *táid* 'thief,' *táin bó* 'cattle-stealing,' Skt. *tājú-s* 'thief.'

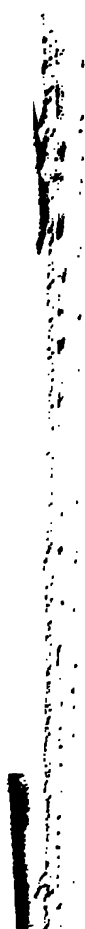
From the second edition of the reprinted 'Remarks,' p. 43, we get the following:—

*εὑρον*, OIr. *fúar* 'inveni.' It can hardly be right to identify these two forms directly with each other, for the 1st sing. *fúar*, 3rd *fúair*, 3rd pl. *fúaratar* shows the Irish perfect



inflexion. To *fúar* as pret. pass. belongs *frith*, *fofrith* 'inventum est.' The utmost to be got from this is an Irish rt. *far*, i. e. *var*, compounded with *fo* (sub.) *fo-far*, blended in the perf. to *fúar*; the pret. pass. *frith* without the preposition, and *fo-frith* with it contains the weakened root, in which the *ri* would correspond to a Skt. *r*, although on the analogy of *breth* (cp. Skt. *bhrta*), pret. pass. of *berim* 'I carry,' we should expect *freth*. As to the Gk. *εῖρ*- there is no deciding how we ought to regard it,—possibly, as a 'petrified' *vevr*-.

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# I. INDEX OF SUBJECTS.

The figures refer to the *marginal* numbers. Numbers 1—403 are in Vol. I; numbers 407—737 in Vol. II.

- A, splitting of 51, 90, 411, 439 f., 445; relative weight of 440 ff.  
 Aberrations of the linguistic instinct 581, 688 f.  
 Abstracts from concretes 95, 102; personified 121; denoted by the feminine 642, 644.  
 Accent 51, 574, 582, 638; significant 345; an original cause of weakening 440, 436, 518.  
 Accident, 591.  
 Addition of sound; see 'Zulaut.'  
 Adjectives 518, 642, 647.  
 Adverbs 632 ff., 648 ff.; petrified cases of adjectives 648; cp. Suffixes.  
 Affection 23, 445, 457, 497, 506, 697 ff., 700.  
 Affinity, elective 661.  
 Affricated sounds 417 ff.  
 After-sound 458, 488.  
 'Age' from rubbing away 114.  
 Age of languages 12.  
 Agriculture 171.  
 Albanian 208, 253, 448.  
 Alexandrians 6, 17, 116, 385, 509, 578, 650, 725.  
 Alliteration 43, 200.  
 Allotting 314.  
 Alphabet 602, 682 f.; transliteration of the Skt. Zd., Cyrillic 125 f.  
 Analogy 6, 10, 34, 96, 111 ff., 544, 583, 627, 631, 635, 640, 658, 676, 690, 700, 701, 721; false 643; apparent 675.  
 Anaptyxis 197, 264, 280, 345, 471, 556, 585, 718 ff.; in the beginning of a word 720 ff.; in the middle 727 ff.  
 Ante-Greek 652, 682.  
 Anticipation of sound (*Vorklang*) 55, 289, 532, 681 f., 740.  
 Antiphrasis 6.  
 Anusvāra 125.  
 Aorist 63, 105, 431, 459, 467, 573 701; aorists with  $\xi$  615, 632.  
 Aphaeresis 32, 35, f., 369, 394, 544; in Sanskrit common 306.  
 Apocope 430, 566, 666, 726.  
 Appellative 117 f., 121.  
 Aristarchus 110, 117, 363, 577, 662, 672.  
 Armenian 92 f., 426, 553, 596, 720.  
 Art of scratching older than that of painting 165.  
 Articulation, strength of, 426, 438 ff., 446, 451, 533, 561; place of 445, 621, 668 f.  
 'As' from 'not' 317.  
 Aspirates 82 ff., 144, 414 ff., 431, 669; dislike of two contiguous syllables in Greek beginning with simple aspirates 219; Greek aspirates, real sound of 414, in Latin loan-words 416, in Mod. Gk. 417, in Ital. 424, in other languages 420; change of the aspirates into spirants 442 f.; relation of the Greek aspirate to the corresponding tenuis 445, 501, 522 ff., to the medial 250, 525 ff.; labial aspirate 484 ff.; variations of, 474, 482, 493.  
 Aspiration 26, 180, 350, 500 ff., 700, 705; transposition of, 60, 253; of later origin 224, 247, 266, 463 f., 504, 506 f., 521, 684; internal aspiration 413, 517, 521, 689; Boeotian aspiration 495; common in the proximity of  $\sigma$  382, in Irish 240.  
 Ass 402.  
 Assimilation 84, 449, 485, 621.  
 Assimilation 140, 159, 220, 241, 285, 337, 418, 423, 429, 431, 438, 443, 450, 457, 467, 569, 588, 592, 609, 632, 653, 664, 669, 675, 698; Boeotian 316, 495; Aeolic 653; of an

- initial to a medial letter, 280, 465, in Irish 127.  
 Augment 36, 38, 580.  
 Auxiliary consonants, 69, 307.  
 Auxiliary (subsidiary) vowels; see Anaptyxis.  
 Baking among the Graeco-Italians 466.  
 Basque 720.  
 Beasts, and their young 97, 646 f.  
 Beasts, names of 78.  
 Begetting 58.  
 Blood, flesh 155.  
 Blow, puff up, let stream out, burn 283, 509.  
 Body, parts of 112.  
 Breath, existence 375, sleep 387.  
 Breathing, loss of the 524 ff., 538; shifted 517; cp. Spiritus asper and Spiritus lenis.  
 Burning and breathing 108.  
 Cardinal ideas 97 f.  
 Case-formation 633.  
 Causatives 60.  
 Chronology of the history of language 39, 47, 425, 629, 640, 656, 670, 675, 684, 707, 717, 728.  
 Class-names 121.  
 Collectives 609 f.  
 Colour from covering 114, 204; designation of 739.  
 Compatibility 410.  
 Compensation 664.  
 Compensatory lengthening 246, 329, 349, 431, 433, 569, 575, 712, 729.  
 Composition, fundamental law of Greek 647.  
 Compounds 37 ff.  
 Conceptions 97 ff., spheres of 99, affinity of 122.  
 Conference 36.  
 Conjectures 122.  
 Conjugation in Latin 221.  
 Consonantal system, Teutonic 51; that of Greek nearer to that of the primitive language than that of Sanskrit 421; in Latin more primitive than in Greek 410.  
 Consonants 82, 84; order of their frequency 408; priority of 441.  
 Consonants, groups of 44, 431 ff., 446, 457, 481, 483, 499, 504 f., 536, 538, 584, 588, 607, 615, 653, 654, 674, 675 ff., 691 ff., 703.  
 Construction of verbs 104 ff.  
 Convenience of pronunciation 435, 446.  
 Crowding, stuffing, protecting, shutting in or out 115, 181.  
 Custom 251.  
 'Dark' as confining 545; as covering 480, 705.  
 Dative and Abl. Lat. -bus=Skt. *bhjaz-* 476; *σφι*=*σοι* 665.  
 Degeneration 23.  
 Degradation of Sound 50, 90.  
 Denominatives 614, 627 ff., 675, 702.  
 Dental consonants 445 ff.  
 Dentalism 479, 485 ff., 490, 497, 622, 668.  
 Derivation 107.  
 Desiderative forms 64.  
 Determinatives (root-determinatives) 59 ff., 296, 463 f., 497, 529, 545, 556, 597, 655, 657, 730.  
 Dialects, in general 8, 86, 89, 309, 425, 577 f., 713 f.—Achaean 691.—Aeolian 143, 150, 160, 212, 235, 237, 256, 274, 280, 339, 345, 352, 360, 377, 378, 387, 389, 390, 402, 425, 464, 483, 484, 488, 490, 535, 542, 550, 566, 569, 609, 618, 622, 634, 637, 640, 653, 665, 674, 687, 690, 699, 711, 716, 729.—Aetolian 492.—Alcman 484, 679, 709.—Argive 285, 309, 391, 433, 599, 609.—Arcadian 235, 258, 285, 309, 383, 474, 475, 487, 491, 548, 567, 613, 666, 713, 716.—Athamanian 374.—Attic 181, 268, 348, 359, 379, 381, 399, 434, 529, 534, 565, 579, 620, 622, 647, 667, 683, 686, 688, 690, 711, 722.—Boeotian 163, 175, 208, 248, 316, 344, 383, 388, 435, 444, 464, 479, 492, 520, 565, 568, 570, 621, 623, 636, 646 f., 670, 688, 695, 698, 712 f.—Carystian 237.—Chian 521, 609, 680.—Cnidian 269.—Coan 493.—Corinthian 236, 663.—Corcyraean 260, 388, 396, 454, 570, 586, 689.—Cretan 137, 147, 160, 236, 250, 285, 309, 326, 345, 361, 365, 394, 396, 399, 430, 431, 455, 496, 515, 520, 535, 537, 539, 574, 578, 584, 586, 600, 601, 620 f., 674, 682, 696, 706, 729.—Cyprian 54, 117, 281, 285, 309, 320, 357, 369, 376, 379, 383, 398, 434, 455, 461, 472, 487, 491, 498, 544, 550, 570, 571, 602, 614, 657, 663, 672, 678, 681, 696, 713, 716, 717, 718.—Delphian 206, 262, 541, 639, 679, 693.—Dorian, 140, 163, 180, 253, 271, 284, 285, 322, 347, 387, 438 f., 450, 481, 483, 487, 488, 492, 495, 514, 536, 543, 601, 607 f., 614, 680, 696 f., 699.—Elic 181, 201, 274, 303, 343, 360, 395, 413, 436, 451, 458, 667, 690.—Epirot 241, 485, 548, 559, 610, 617, 715.—Eretrian 435.—Heracleic 234, 384, 393, 396, 536, 561, 614, 635, 688, 690.—Hesiod 310, 392, 540, 561, 566, 581, 639, 641, 662.—Homeric 260, 281, 285, etc.—Ionian 162, 274,



- 285, 327, 333, 348, 355, 466 f., 487, 507, 524, 542, 568, 608, 631, 649, 652, 663, 683, 685, 696, 711, 713, 728.—Lacanian 117, 132, 181, 207 f., 242, 245, 257, 285, 348, 376, 378, 382, 384, 387, 389, 395, 399, 400, 403, 413, 453, 469, 492, 550, 552, 565, 567, 586, 599, 621, 688, 694, 713.—Lesbian 229, 260, 296, 348, 378, 385, 399, 403, 443, 460, 484, 490, 586, 617, 687, 699, 715.—Locrian 229, 234, 285, 383, 396, 411, 466, 502, 561, 570, 574, 615, 683.—Megarian 451.—Pamphylian 285, 307, 483, 598, 600.—Paphian 194, 468, 564, 713, 717, 729.—Pergaeian 391.—Pindar 264, 296, 402, 403, 569.—Rhodian 585, 698.—Samiian 471, 571.—Sicilian 462, 566, 621, 690.—Simonides of Amorgos 286.—Syracusan 393.—Tarentine 392, 462, 564, 614, 690.—Thasian 253, 510.—Theocritus 191, 339, 592, 599, 674.—Thessalian 383, 451, 471, 482, 484, 569, 575, 609, 635, 722.
- Differentiation, tendency to 410, 653.
- Digamma; see Greek Index.
- Dilettantism 122.
- Diminutives 29, 107, 194, 248, 294, 296, 392, 495, 502, 523, 545, 595, 629, 638 f., 641, 655, 701 f.
- Diphthongization 162.
- Diphthongs 691 f., 741; passing into short vowels 609, 711: *av* 566 ff., *av* *ev* pronounced like *af*, *ef* 571; *ev* (*eo*) 568 ff.; *ov* 568 ff.; *oi* 577, 650, 657; *i* + preceding vowel 607.
- Direction, adverbs of 38.
- Dirt from wetting 114.
- Dissimilation 298, 304, 357, 358, 371, 443, 451, 530, 584, 708, 715; to avoid the recurrence of a similar sound in a syllable immediately following 706 ff.
- Distinctness 691.
- Divination, etymological 122.
- Domestic animals 78.
- Double consonants 532, 632, 680, 712, 713, 722.
- Double roots 52, 59 ff., 263.
- Dual 95.
- Dulling of sound 144, 254, 578, 617, 714 ff.
- E, the letter 51, 90 ff.
- Earth as 'the trodden' 114, 241, 245; as place of growth 262.
- Elision 285.
- Ellipse 7, 644, 648.
- Enantiosema 6.
- Epenthesis 577, 624, 680 f., 718 ff., 741; of *a* 288; of *i* 157, 160, 171, 299, 341, 432, 502, 552, 650; of *o* 243, 251; *v* 322, 552; in Zend 680; in Gothic 155, 476, 680; of *a* in OHG. 132; of *l* in Slavonic 285; of *s* in Lith. 265.
- Eratic 285, 352.
- Etruscan 399.
- Etymology: name of 5; conception of 3, 110, 121, 441; of the ancients 5 ff., 437; of the moderns 8 ff., 80, 718: system 97, factors 118, points of view 734 ff.
- Euphemism 6, 111.
- European languages 83, 91, 149 f., 164, 166, 189, 204, 223, 226, 249, 271, 277, 301, 313, 320, 337, 341, 368, 376, 400, 441, 449, 549, 554.
- Existence 304, 374.
- Expansion 235, 383, 473.
- Explosives: = momentary sounds 82 ff.; relation to the fricatives 441 ff.; groups 446: sporadic changes 456 ff.; preference of 654.
- Expulsion of a consonant 31, 136, 364, 399, 692 ff.
- Eye 115.
- F, 425.
- Falling, gliding 475.
- Fastening, grasping, fitting 268.
- Feeling 99.
- Final letter of roots 57, 59, 655.
- Finger (*fängen*) 114, 133.
- Fitting 340.
- Five, the No. 465.
- Flickering, etc. 108, 303.
- Flowing 96.
- Folding, plaiting 165.
- Foreign words; see Loan-words.
- Free 496 f.
- Frequentatives 630.
- Fricative sounds 82, 441.
- Fulness 79, 509.
- Fundamental meaning 29, 108 f., idea 97; its modification 56; form 29, 108 f.; substance 35, 43; conception 103 ff.
- Futures: in  $\epsilon$  615, 632; Doric in  $-\sigma\omega$  608 f.
- G, *gh*, double, 84 ff.; *g*, *ǵ* to *b* 456.
- Gall 203.
- Gemination 467.
- Genera verbi 105 f.
- Genitive: Cyprian in  $-\omega\upsilon$  (so-called) 54, in  $-\omega\iota\omicron$  607; gen. plur. of *i*-stems in German 608.
- Gentilia 624, 641.
- German 393, 425, 433, 436, 439, 447, 453, 558, 590, 596, 608, 612, 624, 664, 670.

- Gerund, gerundive: Latin 199, 664;  
Sanskrit 648, 650.  
Gliding sound 553.  
Glosses 110 f., 453.  
Gloss-writers 672.  
God 78, 509.  
Going 97.  
Graeco-Italic 56, 75, 91 ff., 101, 179,  
184, 188, 199, 218 f., 223, 227, 261,  
289, 294, 314, 321, 339, 346, 381,  
384, 389 ff., 398, 400, 411, 443, 457,  
466, 473, 544, 548, 555, 568, 572,  
601, 612, 645, 682, 692.  
Grammatical gender 112.  
Grammatical tradition 116.  
Grasping 196.  
Great, from grown 549.  
Groaning, see Pressing.  
Growing and nourishing 356.  
Guna 50.  
Gutturals changing into palatals in  
Sanskrit 446 f.; into labials in Greek  
26, 447 f.; their tendency to unite  
with *j* 485; *g* to *gv*, *v* 661.  
Gypsies, language of the 422, 424,  
554.  
  
H hardly a consonant 413, 423.  
Half-vowels; see Spirants.  
'Halmwurf' 214.  
Hard 144.  
Hardening of sound 394, 600, 676, 687,  
699.  
Healing art 389.  
Hearing 99.  
Herodian 436, 616, 617, 620, 634, 684.  
Heroes, their names, 118 f.  
Hesychius 111, 597, 672, 679, 698.  
Heteroclisys 643.  
Hexameter 646.  
Hiatus 354, 562, 575, in Homer 137,  
581, 604.  
Hindustani 424.  
Holsatians 239.  
Homeric language and poems: 110,  
116 f., 274, 434, 559 f., 561 f., 569 f.,  
577 f., 581, 634, 638, 648, 672, 715.  
Homonyma 47, 118 f., 593.  
Hungarian 720.  
Hyper-Doric 354.  
Hyperthesis 7.  
  
Identity, partial and complete 70.  
Idyll, Indo-Germanic 231.  
Imitation 431.  
Inchoatives 62, 105, 556.  
Indian languages 104.  
Indian literature, etc. 26.  
Indo-Eranic 488.  
Indo-Germanic 22, 26, 31 f., 43 f., 45,  
47, 49 f., 57, 59, 70, 72 f., 74, 76, 78,  
81 ff., 89 f., 94, 98, 100, 102 f., 104,  
117, 149, 153, 155, 165, 194, 197,  
221, 257, 259, 261, 316, 329, 333,  
354, 381, 390 f., 393, 409 ff., 423,  
425, 431, 442, 446, 448 f., 455, 457,  
462, 469 f., 480, 487 f., 493, 553 f.,  
555 f., 563, 589, 607, 619, 626, 635,  
637 f., 639, 654, 658, 675, 677, 679,  
687, 708, 714.  
Infinitive of the middle voice 63.  
Initial letter of roots 56; initial vowel  
preserved in Greek 244.  
Inscriptions 543, 683; of Andania 390,  
539, 614; Aspendus 600; Chios 502,  
521, 609, 680; Cnidus 269; Coreyra  
396, 431, 454, 570, 586, 689;  
Crete 557, 584, 620 f.; Delphi 490,  
572, 639; Dyme 691; Epirus  
485, 559, 610; Eretria 453; Hera-  
clea 472, 550, 561, 635, 683, 688,  
696; Idalion 461, 472, 498, 570,  
682; Mitylene 639; Naupaetus 466,  
570; Naxos 570; Olympia 453,  
660; Priene 571; Rhodes 585, 698;  
Samos 571; Tegea 474, 573, 666;  
Teos 574, 623; Thasos 253, 510;  
Thera 414, 512, 689.  
Insertion of a *p* (?) 455; (apparent) of  
a *τ* 497 f.; of a *θ* 499; of a *δ* 659;  
of vowels; see Epenthesis.  
Instrumental 284, 648.  
Intensification; see 'Zulaut.'  
Interaspiration 517.  
Intermediate conception, 232, 364.  
Interrogative and indefinite 466.  
Iron known to the Indo-Germans, 246.  
Irrational vowels 536 f., 608.  
Itacism 412, 718.  
Italian 91, 250, 254, 420 (preference  
for the hard explosive) 424 f., 439,  
447, 453 (*s* = *r*) 467, 472, 484, 500,  
545, 558, 711, 712, 727.  
  
J retained 602 ff.; with prefixed *δ*  
623 ff.; its influence 676; changing  
into the spiritus asper 396, 449, 686;  
into *δi* 633 ff., into *δε* 636; into *δ*  
636 ff., 651 ff., 658 ff.; *j* occurring in  
*λλ*, *pp*, *vv* 664, *σσ* (*ττ*) 486, 665 ff.,  
*χθ* 675, *πτ* 676 ff., *μν* 677; *j* deve-  
loped from *i* 635, 638, 649, 655;  
*j* as iota transposed into the pre-  
ceding syllable 678 ff.  
  
K, originally twofold (*k*, *ḱ*) 84 ff., 458;  
an original becoming *p* 161, 456;  
*p*, *qu*, *hv* 459 ff.  
Keltic 92, 425, 448, 458, 464, 472,  
500, 584, 590, 596, 602, 624, 639 f.,  
659, 684, 711, 720.  
Kinship, names of 78, 174, 308, 315,  
320, 546, 636, 645, 646.  
Knowing and parting, 101, 110.



- Labdacism 279, 361.  
 Labialism 101, 456 ff., 464, 481, 483, 485 f., 489, 491, 493, 591, 705; double 465, in Skt. (?) 469.  
 Labials, interchange of 595, passing from gutturals 670.  
 Labial zetacism (?) 670.  
 Language, form and substance of 104.\*  
 Language, instinct of 48, 100, 102, 217, 426, 631, 698; weakening of this instinct 52, 56.  
 Language, history of, see Chronology: life of 39, 44, 102, 431 f., 688.  
 Language, organization of 59; philosophy of 95; material of 35; physiology of 436; strata of 432.  
 Language, science of 39, 427, 430, 443; see Philology.  
 Languages, kinship of 21: separation of 32, 40, 57, 75, 82, 104, 179, 452, 525, 553, 707; assibilating and not assibilating 84 ff.  
 Leave, abandon 463.  
 Laziness of language, 410, 446.  
 Lengthening 217.  
 Length, moveable 578.  
 License 577, 580, 693.  
 Linguals of Sanskrit 26.  
 Liquids 82 ff., 449; their sporadic interchange 547 ff.; their influence on aspiration 501; the relation of *l* to *n* 450; of *p* to *λ* 553 f.  
 Living languages, advantage of 30.\*  
 Loan-words 438, 484; in Skt. 374; Gk. 141, 438, 484, 495, 503, 537, 575, 579, 663, 696, 722; Lat. 139, 141, 179, 184, 259, 265, 266, 300, 313, 314, 341, 359, 363, 438, 469, 472, 495, 680, 705; Teutonic 141, 142, 153, 278, 344, 359, 382, 390; Slavonic 141, 188, 359; Lith. 359; Celtic 131, 148, 149, 158, 163, 172, 173, 182, 216, 302, 336, 337, 359, 364, 367, 377, 387, 388, 390, 403, 447, 469, 494.  
 Locative; see Dative.  
 Loss of a consonant 692 ff.  
 Lying and whispering 530.  
 M interchanged with *n* 448: *m* changed to *v* in Celtic 590.  
 Macedonian 194, 250, 344.  
 Meal from division 114.  
 Meaning 94 ff., 107; development of, 25, 112; doctrine of, 94 ff., 105 f., 520, 606; change of 94 ff., 111 ff., 656, 735.  
 Medial for aspirate or tenuis, see Aspiration.  
 Medials 82, 444, 525.  
 Messapian 448.  
 Metals 197.  
 Metaphor 112, 627.  
 Metaplasmas 617.  
 Metathesis 7, 54, 62, 65, 113, 131, 143, 144, 161, 168, 175, 176, 179, 200, 229, 239, 265, 316, 323, 342, 344, 346, 352, 354, 362, 382, 433, 459, 464, 509, 549, 567, 587 f., 622, 653 f., 696, 699, 705, 713, 720, 727.  
 Metre 560, 569, 575, 693; its influence in Epic poetry 646.  
 Misunderstanding 722.  
 Mixed verbs 105.  
 Modern Greek 105, 110, 391, 403, 412, 417, 442, 495, 497, 538, 583, 608, 612, 615, 617, 623, 632, 647, 660, 666, 670, 674, 681, 705.  
 Moon as the measurer of time 333.  
 Mother-tongue 31.  
 Motion 193.  
 Multiplicatives 650.  
 Mutes, gradations of the 120.  
 Mutilation 383, 494.  
 Mythological etymology 118 ff., 655.  
 N changed to *l*, *r* in Romance languages 451.  
 N ephelkystikon 54, 431.  
 Naïveté 40.  
 Naming 117.  
 'Nasalis sonans' 44.  
 Nasalization 35, 53 ff., 219, 227, 510, 539, 596.  
 Nasals 53 ff., 82 ff.; guttural 448; accessory 64; their sporadic changes 543 ff.; their influence on vocalism 501, 504.  
 Natural law 427.  
 Navel 294.  
 Neighbourhood, from striking 115.  
 Neighbouring sounds 410, 500.  
 Nomen, 39; derivation 107 f.; N. agentis 540, 639, 647; N. actionis 639.  
 Nominative, sign of 47.  
 Nominum impositor 12, 17.  
 Northern languages 92, 471, 555, 602.  
 Noun-formation 68.  
 Noun-stem 47, 68, 642.  
 Noun-suffix 75; see Suffixes.  
 Numerals 76, 537.  
 Numeration, systems of 95.  
 Nunnation 55.  
 O 51, 90 ff.  
 Onomatologia 118.  
 Onomatopoeic 287, 574.  
 Opening 113.  
 Organ, change of 167, 704.  
 Ossetic 500, 720.  
 Over and under 290.  
 P changed to *v* in Romance languages 442; not a favourite letter in Celtic 446; changed to *k* in Irish 447.

- Palatalism 488, 669.  
 Palatals 88; of Sanskrit, 26, 27, 458, 485 f.; in modern Indian and Romance languages 475.  
 Palatal sibilant 28.  
 Pāli 422.  
 Paragoge 611, 617.  
 Paraschematism 611, 639, 641.  
 Parasitic sounds 410, 442, 458, 479, 486, 499, 597, 624, 633, 636, 660, 661, 719, 720, 732.  
 Participial theory 74 f., 645.  
 Patronymics 634, 635, 636, 637, 641, 645 f.  
 Perception 99.  
 Perfect 38, 61, 376, 505, 507, 511, 531, 623, 651, 707.  
 Perfect, present 626.  
 Persian 425, 442, 443, 500, 596, 660, 720.  
 Personal terminations 423, 495, 505.  
 Persons, names of 117, 638.  
 Pessimism 111.  
 Pet names 117, 225.  
 Petersburg Dictionary 30, 40.  
 Philology and the science of language 102.  
 Phonetic change 597; see Sounds.  
 Phrygian 5, 203, 204.  
 Physiognomy of languages 96.  
 Physiological value of sounds 93.  
 Physiology of the sounds of language 82, 411, 426 ff., 443.  
 Places, names of 118.  
 Plato 5, 259.  
 Playing, 99.  
 Pleonasm, 7, 580, 590.  
 Pluperfect 651.  
 Pneumatology 683.  
 Polynesian 446.  
 Polyonymy 102.  
 Popular etymology 132, 317, 438, 547, 691.  
 Position 609, 616.  
 Post-Homeric time 561.  
 Prakrit 422, 665.  
 Prefixed vowels, see Prothesis; consonants 719.  
 Prefixes 32 ff.; copulative 208.  
 Prefix-theory 33, 40.  
 Prepositions 37 ff., 77, 106, 446, 687.  
 Present, expansion 62, 182, 577, 622.  
 Present-stem 100, 104, 334, 376, 611, 615, 618, 619 f., 652 f., 664, 675 ff., 701.  
 Pressing, groaning 213.  
 Preterite 38.  
 Primitive forms 98; syllables 11; vowels 59; words 45.  
 Primitive Greek 602, 665; Italian 442.  
 Primitives 72.  
 Privative meaning of derived verbs 295.  
 Pronominal stems 68, 77, 543 f.; possessive 635.  
 Pronunciation of Greek S, of the Aspirates 413 ff.; later pr. of the Media 529; of the av, ev 571, of  $\beta$  583, of  $\zeta$  619; of the spirate asper 682 f.  
 Proper names 117 ff., 716.  
 Protecting; see Crowding.  
 Prothesis 578 ff., 718 ff.; in Greek 206, 359, not common in Latin 322; of a 137, 166, 206, 208, 230, 248, 250, 266, 295, 307, 324, 326, 348, 356, 364, 383, 387, 490, 557, 568, 578 f., 582; of e 36, 182, 192, 252, 310, 325, 480, 564, 579 f., 582; of o 195, 208, 245, 295, 321, 349 (bis), 371, 532; prothesis in Sanskrit 185, in Slav. 295.  
 Psilosis 524, 683.  
 Psychology 96, 631, 681.  
 Quantity, transposition of 253, 347; variation of 649.  
 Quiver from carrying 115.  
 R, its priority to l 449.  
 Recognize 115.  
 Recta ratio 11.  
 Reduplication 38, 95, 105, 175, 465, 467, 473, 543, 551, 605, 626 (bis), 633, 685, 705 f.; with a diphthong 232, 680; not common in a subst. 574; broken, 174, 298, 300, 359, 478; weakened 712.  
 Resonants 53.  
 Rhotacism 400, 453 f.  
 Rigveda 26, 30, 36.  
 Romance languages 311, 442, 444, 447 ff., 457, 544, 562, 582, 596, 602, 624, 659, 660, 667 f., 670, 684, 696, 720.  
 Roots 43 ff., 98 f.; number and nature of 47 f.; secondary 42 f., 296; defective 105; affection of 56; pairs of 40, 461; expansion of 68, 473 f., 476, 509, 575; generations of 69 f.; triplets of 40; variation of 42 f., 56 f.; idea of 104; comparison of 81; vowel of 43.  
 Roots in Greek 48 f., 734; with two aspirates 49; primary and secondary 59; false 108.  
 Roots, lists of roots drawn up by the Indians 26, 108 f.  
 Root-words 615.  
 'Rough' Greek 17.  
 S, sharp and soft (s, z) 88 f.; becoming the spir. asp. 413, 415, 449; s prefixed (ʃ) 56; s attached to particles 290, 309, 383; relation of s to r 452 f.; disappearance of 145, 413, 429; s from  $\xi$  696.  
 Sanskrit, importance of S. for the science



- of language 25 ff.; position in relation to the kindred languages 31 ff., 422, 440, 445, 449, 500, 525, 585, 627, 640 f., 701, 707; Vedic 26, 30, 38, 105, 201, 203, 206, 209, 213, 234, 258, 266, 272, 274, 277, 278, 279, 281, 286, 296, 297, 317, 338, 342, 383, 426, 464, 466, 522, 551, 562, 565, 572, 603, 607, 637, 720, 724.
- Saying, showing 102, 115.
- Scandinavian 558.
- 'Schwa' 727.
- Scythians 415.
- 'Seam' in a compound 642.
- Secondary languages 422.
- Seeing, spying 98 ff., 113, 168.
- Semasiology; see Meaning.
- Semitic 88, 416, 439, 450, 590, 706, 720.
- Showing; see Saying.
- Slave, slavery 497.
- Slavo-Lithuanian languages 84 f., 88, 229, 393, 425, 442, 447 f., 455, 544, 677, 720.
- Slowness and weakness 113.
- Softening 31, 431, 533 ff.,  $\kappa$  to  $\gamma$  152, 620, 673, 678;  $\tau$  to  $\delta$  536 f., 634;  $\pi$  to  $\beta$  219, 537 ff.;  $h$  to  $f$  (?) 542;  $r$  to  $l$  288;  $\epsilon$  to  $i$  365, 467, 635, 705.
- Sound 104, 431; accessory 639.
- Sounds, affections of 90; sporadic affections of 682; similarity of 122, stock of 81 ff., 89; changes of 44, 409 ff., 426 ff., 435, 572, 678; normal and abnormal 733 f.
- Sounds, history of 618, 669, 685; laws of 81, their operation 427, 431 ff., laws in OIrish 127; tendencies of 638; splitting of 89 ff., 411; transitions of 89 f., to be regarded as weakening 23, 410, 671; involuntary 429; loss of 89, 429.
- Sounds, shifting of 18, 26, 81, 89 ff., 180, 207, 380, 425 f., 473, 499 f.; irregular 264; neglected 135, 167, 178, 246, 256, 351, 473, 534.
- Sounds, regular representation of 83, 128 f., 408, sporadic 89, 426 ff., 431, 437, 630 f.
- Spirants 82, 118, 695; changed into aspirates 413; disinclination to these in Greek 413, 558, 602; in the form of  $i$ ,  $v$  426, of  $e$ ,  $o$  426; their historical position, 449; their sporadic change 558 ff.
- Spiritus asper 23 f., 682 ff.; signs representing spir. asp. 396, 683; after  $p$  454; arising from  $j$ ,  $s$ ,  $v$  396, 449, 682; from  $\sigma$  24, 354, 373, 392, 412 f.; from  $\sigma f$  136; for the spir. lenis 24, 120, 378, 462, 687 ff.; inorganic 263.
- Spiritus lenis 43, 83; arising from  $\sigma$  137, 379; from  $\sigma f$  686; from  $f$  686; instead of spir. asper 344, 349, 379, 685 ff.; in Homer an Aeolism, 548.
- Spout, sprout 251, 301, 523, 587.
- Standing 93; and strength 494.
- Stem 24, 44.
- Stems in  $ad$  642 ff.;  $i$ ,  $ad$  638 ff.;  $i\theta o$  523, 574;  $io$  283, 426, 519, 566, 607;  $iov$  607, 631;  $v$  544.
- Stem-syllables 435.
- Stem-words 95.
- Stoics as etymologists 6.
- Stomphasmus 55.
- Stone, thunderbolt, etc. 131.
- Stuffing; see Crowding.
- Strengthening 680, 732.
- Suffixes: 69 ff.; their false identification 70 ff.; meaning 72; variety 73; derivative 632; amplifying 286, 333, 385, 391, 645; diminutive 574, 679, 717; hypocoristic 281, 355, 365, 479, 534, 679; individualizing 72, 287, 374, 382, 549, 611, 647.
- Indo-Germ.: *tra* 431, *ja*, *ija* 635.
- Greek: *abo* 465.
- ad* 634, 637, 643.
- aio* 646.
- ax* 534.
- alo* 679.
- ap-ro* 145.
- apt* 240, 461.
- as* 587.
- aso* 717.
- at* 180, 403, 549.
- apo* 496.
- ba*, *bo* 141, 585.
- da* 636, 637, 645, 646, 649 f.
- de* 632, 650.
- deo* 636.
- deu* 636, 646, 647.
- dyn* 649 f.
- dyn* 648.
- dio* 385, 634.
- dis* 650.
- dov* (nomin. suff.) 653.
- dov* (adverb) 649.
- ea*, *eo* ( $\eta io$ ,  $\eta io$ ) 276, 610, 611, 631.
- ei* 650.
- ela* 174, 276.
- elo*,  $\eta lo$  662.
- es* 71, 587.
- eu* 611, 647.
- fo* 505, 568, 585.
- ze* 632.
- $\theta lo$ ,  $\theta po$  501, 502, 523; cp.  $\tau po$ .
- $\theta o$  62 f., 307.
- $i$  638.
- ia* (masc.) 611.
- ia* (fem.)  $io$  317, 491, 607, 618, 620, 713.
- id* (collect.) 216, 577, 609.

## Greek Suffixes : (continued):

ιγ, ιγγ 287, 535.  
 ιδ 175, 634, 637, 643.  
 ιδεο 646.  
 ιθ 175.  
 ιλο 679.  
 ιμα, ιμο 679.  
 ινδα, ινδην 650.  
 ινο 143, 193, 680.  
 ιο (dimin.) 545.  
 ισκο (dimin.) 29.  
 ιν 395.  
 ιχνα, ιχνιο, υχνιο 502.  
 ιχο 495, 701, 702.  
 ιών 160.  
 κ 298, 349, 382, 495, 535, 639,  
 655, 674, 679.  
 καλο 382.  
 κι 175, 639.  
 κο 300, 380, 535, 692.  
 λο 558.  
 μαρ 594.  
 ματ 611.  
 μενο, μνο 330, 475.  
 μερο 378, 402.  
 να 550.  
 νια 653.  
 νο 264, 590.  
 νος 172, 346.  
 ο 43.  
 ολα 642.  
 ον 177, 646.  
 οντ 645.  
 ρι 540.  
 ρο 558, 709.  
 σιο 634.  
 σος 336.  
 συρο 549.  
 τ 321, 394, 495.  
 ταρ 184.  
 τας 587.  
 τατο 642.  
 τητ 611, 644.  
 τι (σι) 43, 611, 639.  
 τί (adverb) 648.  
 τjo 284, 290.  
 το 320.  
 τop 715.  
 τος 587.  
 τρι 639.  
 τρο 501, 502, 625; cp. θλο, θρο.  
 υ 283.  
 υγα, υγγ 535.  
 υλο 717.  
 υο 565.  
 υχο (ιχο) 718.  
 φι, φιν 39, 687.  
 φο 360.  
 φος 241.  
 ων 385, 646.  
 ωνο 391.

Latin : c 349, 639.

## Latin Suffixes : (continued):

ca 336.  
 cro, clo 76, 431.  
 culo 382, 431.  
 do 664.  
 don 653.  
 ec, ic 374.  
 ejo 635, 646.  
 endo, undo 664.  
 erna 145.  
 es 71.  
 i 333.  
 ico, ica 294.  
 id 637.  
 io 426, 607.  
 ior 426, 607.  
 ro 329.  
 s 173.  
 tāt 644.  
 ti 320.  
 tino 385.  
 tiōn 75.  
 tro 431.  
 tumo 445.  
 ulo 241.  
 uo, vo 212, 316, 505, 565, 585,  
 586.  
 vi 360.

## Sanskrit : ad 637.

an 72, 461.  
 anija 664.  
 anja 664.  
 ara 228.  
 as 71, 74.  
 i 638 f.  
 ija 636.  
 ijans 607.  
 iva 546.  
 ūka 535.  
 eja 610, 631, 635, 646.  
 kara 382.  
 tana 385.  
 tama 445.  
 tāti 644.  
 tja 284, 290, 634, 648.  
 trā 357.  
 tri 639.  
 tva 648.  
 tha 343.  
 bha 360.  
 mara 378.  
 ja 607, 636, 648.  
 jā (collect.) 609.  
 ju 395, 611.  
 ra 329.  
 va 141, 565, 585, 586, 616.  
 vat 491.  
 vara 505.  
 vi 505.

## Zend : i 645.

Lithuanian : i 333.  
 je 633.



- Church-Slavonic: *ŭ* 203.  
                                   *ov* 611.  
                                   *ti* 203.
- Keltic: *ach* 640.  
                                   *yn* 352
- Suffixes, mutilation of 452.
- Svarabhakti 719.
- Syncope 7, 45, 175, 279, 327, 393, 582, 601, 729.
- Synizesis 608.
- Synonymes 79; differences of 99.
- Syntax and Etymology 106.
- Tearing, piercing, scratching 546.
- Tenderness 113.
- Tenses, formation of 61 f.
- Tennis 82, aspirated 148, stronger than the medial 419, 444 f.; changed to a medial 536 ff.: aspirated tennis arising from the medial in Sanskrit 422.
- Termination 24; amplifying 363; hypocoristic 358; paragoric 617.
- Theme 47, 452.
- Thinning of sound 177, 383, 442.
- Time before the separation of languages 57.
- Time, nature and grade of 104.
- Topic 121.
- Trade 104 f.
- Tralignamento 89.
- Trees, names of 610.
- Trembling 181.
- Typus syngenicus 636, Ionicus 646.
- Tzaconic 403, 417, 497.
- U, the letter 411 f., 571: for *a* 714 ff.; denoted by *o* 570 ff.
- Ulphilas 416.
- Umbrian 383, 420.
- 'Umlaut' 681 f.; cp. Epenthesis.
- V, pronunciation of 562: *v* passing into the spir. asp. 449; into *gv*, *g* 661.
- Vedic language; see Sanskrit.
- Verb, advantage for etymology 104; construction 104 ff.; primitive 38, 43, 674; derivative 674; in *-ew* 611; in *-a(ω)*, *-i(ω)* 627 ff., 647, 652; in *πτω* 676, change of usage of 605 f.
- Verbal compounds 38.
- Verbal forms, 2 and 3 sing. pres. in *eis*, *ei* 680; cp. Aorist, Perfect.
- Verbal roots 39.
- Verbs in *μ* 434.
- Via regia 11.
- Vis inertiae 435.
- Visarga 28.
- Vocalism 46, 50, 93, 440, 710; in the middle of words 642.
- Vocalization 582, 585.
- 'Vorklang' 520, 671.
- Vowels 82, 439 f., 719; initial vowels in Gk. 244; in middle syllables of nouns 642; intensification of, see 'Zulaut'; splitting of 51, 58, 90 ff., 341, 411, 439 f.; development of 136, 430, 533; shortening of 644; evolution of, see Anaptyxis.
- Vrddhi 50, 589.
- Vulgar (i. e. common) language 537, 558, 683 f., 740.
- Wallachian 449 f., 452, 669.
- Wave-theory 85.
- Weakening; see Sound, changes of.
- Weakness and slowness 327.
- Wearing out 326.
- Weathering away 23 f., 56, 83, 409 ff., 413, 691, 732.
- Weaving 211.
- Wetting 114.
- Whirring 531.
- Winding, rolling, and grinding 358.
- Window and eye 115.
- Words, stock of 97; formation of 68, 634; secondary formation of 675; couplets of 481; explanation of 19; form of 44; lists of 684; comparison of 80; imitating sounds 534.
- Young of animals, their names, 646 f.
- Zend 422, 458, 680, 721, 727.
- Zetacism 95, 447 f., 449, 486, 666.
- 'Zulaut' 35, 43, 50, 151, 187, 216, 242, 289, 303, 369, 481, 510, 545, 578, 627, 657.

## II. GREEK INDEX.

(MODERN GREEK IN BRACKETS.)

The figures refer to the *marginal* numbers. Numbers 1—403 are in Vol. I; numbers 407—737 in Vol. II. The large figures denote the main reference for a word.

- |                                      |                                |  |                                |
|--------------------------------------|--------------------------------|--|--------------------------------|
| α = am, an 532.                      | ἀγάσαστο 573.                  | ἀγορά 174, 435, 714.                     | ἀδευκής 492.                   |
| ἀ- (negat.) 306, 566, 741.           | ἀγάστος 213.                   | ἀγοραίος 642.                            | ἀδευτόν 570.                   |
| ἀ- (copul.) 323, 344, 392, 685, 741. | ἀγανός, ἀγαυρός 172, 586, 725. | ἀγορανόμος 314.                          | ἀδῆ 250.                       |
| ἀ- 323, 399, 515, 741.               | ἀγε 300.                       | ἀγος 170, 171, 691.                      | ἀδῆκοτες 649.                  |
| ἀσγής 542.                           | ἀγεα 686.                      | ἀγός 170.                                | ἀδην, ἀδην 397, 398, 649, 685. |
| ἀάω 387.                             | ἀγείρω 174, 180, 714.          | ἀγός 171, 691.                           | ἀδίας 250.                     |
| Ἀβαίον 589.                          | ἀγέλη 174.                     | ἀγός 170.                                | ἀδισ 250.                      |
| ἀβάντεσσιν 195.                      | ἀγεν 688.                      | ἀγρε 170.                                | ἀδμή 232.                      |
| ἀβελήν 400.                          | ἀγή 542.                       | ἀγρεμών 170.                             | ἀδνόν 535, 706.                |
| ἀβελίος 399, 515, 690.               | ἀγη 172.                       | ἀγρεύω, ἀγρέω 170.                       | ἀδορος 726.                    |
| (ἀβέρας 387.)                        | ἀγήνωρ 171, 306.               | ἀγριος 171.                              | ἀδος, ἀδος 649.                |
| ἀβηδών 248.                          | ἀγής 170.                      | ἀγρός 171.                               | ἀδραιά 250.                    |
| ἀβήρ 387.                            | ἀγήσαιτο 690.                  | ἀγνιά 170.                               | ἀδραστος 237.                  |
| ἀβλαβής 537.                         | Ἀγήσανδρος 688, 689.           | (αγνιῖδα 613.)                           | ἀδρί 307.                      |
| ἀβληρον 568.                         | Ἀγησίας 689.                   | ἀγυρις 174, 714.                         | ἀδριῖστα 657.                  |
| ἀβληχρός 326, 501, 724.              | Ἀγησίλαος 689.                 | ἀγύρτης 174, 714.                        | ἀεθλεύω, ἀέθλιον 249.          |
| ἀβλύπες 537.                         | Ἀγησίπολις 689.                | ἀγχεμάχος 712.                           | ἀεθλον, ἀεθλος 249, 250, 578.  |
| ἀβλος 468.                           | ἀγήτωρ 689.                    | ἀγχι 180, 521, 527, 712.                 | ἀεθλοφόρος 250.                |
| (ἀβουτάνα 403.)                      | ἀγίζω 171.                     | ἀγχόνη 190.                              | ἀεί 385, 634.                  |
| ἀβρός 538, 540, 589.                 | ἀγινέω 170.                    | ἀγχοῦ 180, 502.                          | ἀείδω 248, 324.                |
| ἀβροτάζω 690.                        | ἀγιος 170.                     | ἀγχρας 502.                              | ἀείρω 250, 340, 348, 354, 579. |
| ἀβροῦτες 295.                        | ἄγιος 171, 619, 680, 691.      | ἀγχω 180, 191.                           | ἀέκητι 136.                    |
| Ἄβυδος 629.                          | ἀγκάλη 130.                    | ἀγω 68, 92, 93, 170, 171, 606, 642, 688. | ἀέκαν 136.                     |
| ἀβυσσος 473.                         | ἀγκαλῖς 621.                   | ἀγορή 379.                               | ἀέλιος 690.                    |
| ἀβώ 400.                             | ἀγκάς 130.                     | ἀγωγίς 599.                              | ἀελλα 386, 387.                |
| ἀβώρ 399.                            | ἀγκοίνη 130.                   | ἀγών 170.                                | ἀελλής 550.                    |
| ἀγαιομαι 172.                        | ἀγκος 131, 385.                | ἀγωνίδαι 652, 653.                       | ἀέναιος 319.                   |
| ἀγάλλω 172.                          | ἀγκτήρ 190.                    | ἀγωνίζομαι 630.                          | ἀέξω 64, 383, 579.             |
| ἀγαμαι 172.                          | ἀγκύλη 130.                    | ἀγώρην 714.                              | ἀεργός 181.                    |
| Ἀγαμέμνων 311.                       | ἀγκύλος 130, 621.              | ἀδαγμός 725.                             | ἀέρδην 649.                    |
| ἀγαν 171, 618.                       | ἀγκίρα 621.                    | ἀδαής 230.                               | ἀερσα 250, 345, 430, 578, 579. |
| ἀγάννιφος 318.                       | ἀγκών 130, 385.                | ἀδαξέω 725.                              | ἀεσα 387.                      |
| ἀγανός 172.                          | ἀγλευκής 358.                  | ἀδδεές 663.                              | ἀέσκοντο 387.                  |
| ἀγαπάω 630.                          | ἀγνοείω 179.                   | ἀδδῆκοτες 649.                           | ἀερε 386.                      |
| ἀγαπάω 109, 630.                     | ἀγνοία 179.                    | ἀδδην 397, 649, 685.                     | ἀετής 208, 566.                |
| ἀγαρρί 714.                          | ἀγνοιῇσι 577.                  | ἀδελφεός, ἀδελφειός 392, 479, 577.       | ἀετιδής 636, 647 (bis).        |
| ἀγάσθαι 598.                         | ἀγνός 171, 706.                | ἀδελφίδος 636.                           | ἀετμα 62, 388.                 |
|                                      | ἀγνυμι 57, 542, 566, 674.      | ἀδελφός 145, 479.                        |                                |



- ἀετμόν 62, 388.  
 (ἀετόπουλον 647.)  
 ἀφάταν 569.  
 ἀφείδω 248.  
 ἀφέρυσαν 569.  
 ἀφηδών 248.  
 ἀφίαχοι 569.  
 ἀφυδός 248.  
 ἀφυτοῦ 570.  
 ἀχαλός 393.  
 ἀζη 393.  
 ἀζομαι 171, 619.  
 ἀζω 393, 670.  
 ἀηδών 74, 248.  
 ἀηθέσσω 665.  
 ἀημι 62, 386.  
 ἀήρ 348, 386, 387.  
 ἀήσυρος 549.  
 ἀήχος 576.  
 Ἀθωμαντίς 642.  
 Ἀθάνα 434, 620.  
 ἀθαπτος 512.  
 ἀθάρη 251.  
 ἀθάριοι 251.  
 ἀθειρής 257.  
 ἀθερές 257.  
 Ἀθήναζε 632.  
 Ἀθῆναι 251.  
 Ἀθήνη 251.  
 ἀθήρ 251.  
 ἀθλητήρ 249.  
 ἀθρόος 392, 685.  
 αἱ 394.  
 αἶ 385.  
 αἰαγμα 579.  
 Αἰακίδευσ 647.  
 Αἰακίδης 647.  
 Αἰακος 655.  
 αἰβητός 391.  
 αἰγαγρος 171.  
 αἰγειρος 180, 181.  
 αἰγες 180.  
 αἰγιαλός 180.  
 αἰγίβοτος 171.  
 αἰγυκορέϊς 470.  
 αἰγίχος 640.  
 αἰγίς (goat-skin) 171, 172.  
 αἰγίς (storm-wind) 180.  
 αἰγλη 679.  
 αἰγυπός 391.  
 αἰγών 171.  
 ἀιδεος 662.  
 ἀιδηλος 662.  
 ἀίδιος 385, 393, 634.  
 ἀιδός 653.  
 αἰέν 385.  
 αἰές 385, 517.  
 αἰετός 391.  
 αἰφεί 385, 561.  
 ἀίηλος 662.  
 αἰζήος 633.  
 αἰθαλος 630, 642.  
 αἰθέριος 519.  
 αἰθήρ 250.  
 Αἰθίοψ 250.  
 αἶθος, αἶθος 250.  
 αἰθωψ 188, 250.  
 αἰθρα 250.  
 αἶθα 250.  
 αἶθων 74, 188, 198, 250.  
 αἰκάλλω 679.  
 αἰκαλος 679.  
 αἰκλοι 679.  
 αἰκλον 679.  
 αἰκνον 679.  
 αἰκτος 138.  
 αἰλα 678.  
 αἰλέω 431.  
 αἰλος 357, 664, 678, 681, 741.  
 αἰμύλιος 283.  
 αἰμύλος 283.  
 Αἰνειάδης 644, 647.  
 αινέω 630.  
 αινίζω 630 (bis).  
 αἰε 171, 679.  
 Αἰολής 641.  
 Αἰολίδης 716.  
 Αἰολίς 641.  
 αἰπώλος 391, 470.  
 αἰρέω 431, 557, 681.  
 αἰρω 340, 348.  
 αἶσα 716.  
 αἰσθάνομαι 99, 386.  
 αἰσθομαι 386.  
 αἰσθω 63, 386, 387.  
 αἰσσω 172, 679.  
 αἰσυνήτης 716.  
 Αἰσυνμος 716.  
 αἰσχος 158, 212.  
 αἰσχρός 158, 367.  
 αἶτας 386.  
 Αἶτην 250.  
 αἶτυρον 579.  
 αἰφνηδής 650.  
 αἰφνίδιος 680.  
 αἰχμή 502, 679.  
 αἶω 31, 386.  
 αἰῶ 385.  
 αἰών 385.  
 αἰώρα 348.  
 αἰωνα 131.  
 ἀκανος 131, 502.  
 ἀκαρον 502.  
 ἀκασκα 679.  
 ἀκασκαίος 679.  
 ἀκαχίατο 652.  
 ἀκαχίζω 630, 652.  
 ἀκαχμένος 131, 502.  
 ἀκείομαι 679.  
 ἀκερσεκόμης 148.  
 ἀκέων 524, 679.  
 ἀκήκοα 569, 623.  
 ἀκήν 17.  
 ἀκήριος 148.  
 ἀκηχίδατ' 652.  
 ἀκηχεδόνες 652.  
 ἀκινάγματα 490, 725.  
 ἀκίναγμος 490.  
 ἀκίς 679.  
 ἀκμή 131, 215.  
 ἀκμονίδαί 131.  
 Ἀκμονος 131.  
 Ἀκμων 131.  
 ἀκμων 131.  
 ἀκοή 569.  
 ἀκολος 114, 679.  
 ἀκόλουθος 146, 241.  
 ἀκόνη 131.  
 ἀκούα 569.  
 ἀκουάσομαι 507.  
 ἀκουή 569.  
 ἀκούσιος 688.  
 ἀκουστός 152.  
 ἀκούω 100, 152, 569, 725.  
 ἀκρις 131.  
 ἀκροάομαι 151, 558, 723.  
 ἀκροβάομαι 586.  
 ἀκρος 131.  
 ἀκρός 688.  
 ἀκτωρ 170.  
 ἀκυλος 188.  
 ἀκχαλίβαρ 132.  
 ἀκχός 132, 595.  
 ἀκωκή 131, 342.  
 ἀκων 131, 504.  
 ἀλαδίζω 371.  
 ἀλαλκεῖν 64, 132.  
 Ἀλαλκομενείς, Ἀλ-αλκομενής 641.  
 ἀλαξ (ἀλξ) 374.  
 ἀλάομαι 557.  
 ἀλαπαδνός 653.  
 ἀλαπάζω 653.  
 ἀλασιν 549, 740.  
 ἀλάστωρ 557.  
 ἀλγηδών 653.  
 ἀλγος 553, 729.  
 ἀλθαίνω 357, 529.  
 Ἀλδήμιος 529.  
 ἀλδήσκω 357, 529.  
 ἀλέα, ἀλέα 552, 685.  
 ἀλεγείνός 729.  
 ἀλεγίζω 364, 739.  
 ἀλεγύνω 364.  
 ἀλέγω 364, 724, 729.  
 ἀλεείνω 557.  
 ἀλέη 557.  
 ἀλειαρ 358.  
 ἀλείτης 373, 557, 588.  
 ἀλειφα 266.  
 ἀλειφαρ 266, 510.  
 ἀλείφω 224, 266, 358, 430, 510, 582, 724.  
 ἀλέντες 115.  
 Ἀλέξανδρος 278.  
 ἀλεξητήρ 362.  
 ἀλέξω 64, 137, 382, 533, 729.  
 ἄλες 548.  
 ἄλετος 358.  
 ἀλετριβανος 358.  
 Ἀλευνάδαι 358.  
 ἀλεύασθαι 557.  
 ἀλευρον 358, 359, 575, 591.  
 ἀλεφάτισσον 261.  
 ἀλέφεισι 266.  
 ἀλέω 358, 591.  
 ἄλη 557.  
 ἀλῆναι 358.  
 ἀλῆς 550.  
 ἀλθαίνω 250.  
 ἀλθήεις 250.  
 ἀλθήσκω 250.  
 ἀλθομαι 250.  
 ἀλία 550.  
 ἀλιόδης 646.  
 ἀλίβαρ 132.  
 ἀλιεύς 548, 549.  
 ἀλίζω (salt) 548.  
 ἀλίζω (collect) 550.  
 ἀλήρης 342.  
 Ἀλικαρνασσός 147.  
 ἀλικίνος 729.  
 ἀλινδία 359.  
 ἀλίνω 366, 724.  
 ἄλιος 548.  
 ἀλιπόρφυρος 549.  
 ἄλις 550.  
 ἀλίσβη 588.  
 ἀλίσκομαι 550.  
 ἀλιταίνω 557, 588, 677.  
 ἀλιτρός 557.  
 ἄλην 132.  
 ἀληή 64, 132.  
 ἀλκιμος 679, 729.  
 Ἀλκιππος 462.  
 ἀλκύνω 132.  
 ἀλλά 357.  
 ἀλλάσσω 357, 675.  
 ἀλληκτος 738.  
 ἀλλήλους 357, 707.  
 ἀλλοίος 357.  
 ἄλλομαι 517, 548, 664.  
 ἄλλος 92, 93, 310, 357, 431, 451, 664, 678, 741.  
 ἀλλότερος 357.  
 ἀλλότριος 357.  
 ἄλλω 716.

- ἀλλυδεις 233, 521, 650, 715.  
 ἄλμα 548.  
 ἄλμενος 548.  
 ἄλμη 548.  
 ἄλμυρος 548.  
 ἄλοάω 358, 359, 575.  
 ἄλοιάω 575.  
 ἄλοιφή 510.  
 ἄλόντε 565.  
 ἄλοξ 136, 566, 576, 579.  
 Ἄλοσύδνη 654.  
 ἄλοχος 194, 392, 685.  
 ἄλπαλαιον 264.  
 ἄλπαλεον 264.  
 ἄλπιστος 264.  
 ἄλς 548, 549.  
 ἄλσις 548.  
 ἄλσος 11, 336, 356.  
 ἄλτήρ 548.  
 ἄλτικός 548.  
 Ἄλτις 356.  
 ἄλτο 548.  
 ἄλυσις 550.  
 ἄλφάνω 292.  
 Ἄλφειός 292.  
 ἄλφεισίοιαι 292.  
 ἄλφημα 292.  
 ἄλφησταί 116, 292, 483.  
 ἄλφι 292.  
 ἄλφιτον 292.  
 ἄλφός 292, 293, 729.  
 ἄλωή 358, 575, 578.  
 ἄλῶναι 550.  
 ἄλωπά 358.  
 ἄλωπεκίδεός 647.  
 ἄλώπηξ 357, 724.  
 ἄλώπηξ 688.  
 ἄλωπός 358.  
 ἄλωπόχρους 729.  
 ἄλως 358, 575, 578.  
 ἄλωφός 293, 729.  
 ἄμα 311, 322, 323, 383, 392, 544, 690.  
 ἄμαθος 696.  
 ἄμακίς 392.  
 ἄμαλάπτω 53.  
 ἄμαλδύνω 230, 327, 724.  
 ἄμᾶλη 323.  
 ἄμαλλα 323.  
 ἄμαλός 326, 538, 724.  
 ἄμαξα 383.  
 ἄμᾶρα 323.  
 ἄμαρτάνω 677, 690.  
 ἄμαρτάς 644.  
 ἄμαρτή 340.  
 ἄμαρύνσω 724.  
 ἄματις 392.  
 ἄμαυρός 567, 568, 682.  
 ἄμαχεῖ 650, 712.  
 ἄμαχητί 136.  
 ἄμάω 323.  
 ἄμβη 294.  
 ἄμβιξ 294.  
 ἄμβλακεῖν 463.  
 ἄμβλύνς 327, 724.  
 Ἄμβρακία 538.  
 ἄμβρόσιος 331.  
 ἄμβροτος 331.  
 ἄμ βομοῖσι 543.  
 ἄμβων 294.  
 ἄμείβομαι 323.  
 ἄμείβω 307, 323, 324, 568, 588, 589, 724.  
 ἄμείλικτος 329.  
 ἄμείλιχος 329.  
 ἄμείνων 328, 681.  
 ἄμείρω 651.  
 ἄμέλγω 173, 184, 430, 533, 555, 721, 724.  
 ἄμελξις 184.  
 ἄμενοι 386, 397, 398.  
 ἄμέργω 184, 555, 721, 724.  
 ἄμέρδω 651.  
 ἄμές 433, 689.  
 ἄμέσω 339.  
 ἄμεύσασθαι 324.  
 ἄμεύω 323, 324, 582, 588, 724.  
 ἄμη 323.  
 ἄμη 323.  
 ἄμηγέπη 393.  
 ἄμητος 323.  
 ἄμητός 323.  
 ἄμηχανος 334, 662.  
 ἄμιλλα 654.  
 ἄμιξαι 725.  
 ἄμίσ 323.  
 ἄμισθί 650.  
 ἄμμα 11, 510.  
 ἄμμε(ς) 433, 689, 690.  
 ἄμμος 696.  
 ἄμνιον 323.  
 ἄμνός 590, 591, 592.  
 ἄμό-θεν, -θι 323, 393, 685.  
 ἄμοιβή 324.  
 ἄμοιβηδής 650.  
 ἄμολγαῖος 184.  
 ἄμολγεύς 184.  
 ἄμολγός 184, 533, 568.  
 ἄμόργη, ἄμόργινος, ἄμοργίς, ἄμοργμα 184.  
 ἄμοργός, Ἄμοργός 184.  
 ἄμός, ἄμός 685.  
 ἄμπάζονται 393, 670.  
 ἄμπελος 355, 359.  
 ἄμπέσαι 601.  
 ἄμπέχω 601.  
 ἄμπλακεῖν 463.  
 Ἄμπρακία 538.  
 ἄμπωτις 434.  
 ἄμυδής 323, 383, 521, 548, 650, 715.  
 ἄμυκαλαί 546.  
 ἄμύμων 715.  
 ἄμυνα 324.  
 Ἄμυνίς 324.  
 Ἄμύντας 324.  
 ἄμύντωρ 324.  
 ἄμύνω 307, 324, 568, 715, 724.  
 ἄμυξις 546.  
 ἄμύσσω 548, 724.  
 ἄμυχή 546.  
 ἄμφαδᾶ 649.  
 ἄμφαδίην 648.  
 ἄμφάδιος 648.  
 ἄμφασίη 306.  
 ἄμφην 482, 592, 593.  
 ἄμφήρης 342.  
 ἄμφί 37, 293, 601, 619, 711.  
 ἄμφιγνώω 179.  
 ἄμφιδέξις 235.  
 ἄμφιέπω 460.  
 ἄμφικτίονες 157.  
 ἄμφικύπελλον 159.  
 ἄμφιλαφής 531.  
 ἄμφιλύκη 160.  
 Ἄμφίμαρος 332.  
 ἄμφίπολος 470.  
 ἄμφιρέπτης 351.  
 ἄμφίρυντος 353.  
 ἄμφίς 37, 234, 293, 435, 619.  
 ἄμφίσβαινα 626.  
 ἄμφισβασίη 626.  
 ἄμφισβητέω 626.  
 ἄμφορεύς 710.  
 ἄμφότεροι, ἄμφω 293.  
 ἄμφῶες 403.  
 ἄμῶς 323, 393.  
 ἄν- 306, 317, 439, 566.  
 ἄν 436, 610.  
 ἄνα- 306, 579.  
 ἄνά 33, 306, 309, 582, 725.  
 ἄνάγκη 309.  
 ἄνάγνωστος 306.  
 ἄναδεσάμενον 696.  
 ἄνάδοσις 315.  
 ἄνάενδος 306, 579.  
 ἄνάελπτος 306, 579.  
 ἄνάζω 673.  
 ἀναίκλεια 679.  
 ἄνακ-es, -οι 675.  
 ἀνακωχή 482.  
 ἀναλέγομαι 364.  
 ἀναλτος 356.  
 ἀνανέμομαι 314.  
 ἀνάπνευστος 579.  
 ἀναπολεύω 470.  
 Ἄνασικλέους 696.  
 ἀνασσα 675.  
 ἀνάσσω 675.  
 ἀνατέλλω 221.  
 ἀναφανδόν 649.  
 ἀναφλύνω 301.  
 ἀνδάνω 35, 106, 229, 686.  
 ἀνδράχλη 502.  
 ἀνδρεία 306, 609.  
 ἀνδρείος 306.  
 ἀνδρεϊφόντης 299.  
 ἄνεμος 73, 91, 108, 305, 730.  
 ἀνενηνεγκται 308.  
 ἄνευ 306.  
 ἀνεψιάδους 636.  
 ἀνεψιός 266, 267.  
 ἄνεως 388.  
 (ἀνδzelos 741.)  
 ἀνήνοθε 251, 730.  
 ἀνηγορή 609.  
 ἀνήρ 306, 455, 522, 576, 719, 724.  
 ἀνθεμον 250.  
 ἀνθερέων 250.  
 ἀνθέρειξ 251.  
 ἀνθίω 250.  
 ἄνθη 250.  
 Ἄνθηδών 251.  
 Ἄνθηλη 251.  
 Ἄνθηνη 251.  
 ἀνθηρός 250, 251.  
 ἀνθιμος 233.  
 ἀνθος 250.  
 ἀνθοσμίας 646.  
 ἀνθρακιά 216, 577, 609.  
 ἀνθραξ 502, 522.  
 ἀνθρωπος 14, 306, 307, 522.  
 ἄνία 546.  
 ἀνιάζω 546.  
 ἀνιαρός 546.  
 ἀνιάω 546.  
 ἄνις 306.  
 Ἄνις 575.  
 ἀνορούς 346.  
 ἄντα 205, 206, 263.  
 ἄνται 305.  
 ἀνταμείβομαι 324.  
 ἀντάξις 171.



- ἀνταποδιδῶσα 667.  
 ἀντάω 205.  
 ἀντην 205, 649.  
 ἀντί 92, 205, 206, 263, 430.  
 ἀντιάω 627.  
 ἀντιάω 205, 627.  
 ἀντιβίην 649.  
 ἀντίβιος 476.  
 ἀντικρυς 205.  
 ἀντίος 205.  
 Ἀντίπατρος 617.  
 ἀντίρροπος 351.  
 ἀντλέω 221.  
 ἀντλον 323.  
 ἀντομαι 205.  
 ἀντορος 690.  
 ἀνυδρος 248.  
 ἀνύτω 677.  
 ἀνύω 677.  
 ἀνω 306.  
 ἀνώνειν 117.  
 ἀνώνυμος 320, 435, 715.  
 ἄξιος 171, 209, 648.  
 ἄξιος 574.  
 ἄξιος 488.  
 ἄξιος 574.  
 ἄξων 132, 383, 431.  
 ἀοδμος 708.  
 ἀοζος 241.  
 ἀοιδή 248.  
 ἀοιδιμος 642.  
 ἀοιδός 248.  
 ἀοικος 163.  
 ἀοικνος 708.  
 ἀολλής 550.  
 ἀοπος 348.  
 ἀόρατος 346.  
 ἀορες 354.  
 ἀορμος 348.  
 ἀορμος 348, 708.  
 ἀος 386.  
 ἀοσμος 229.  
 ἀοσητήρ 460.  
 ἀπάλαμνος 677, 678.  
 ἀπάλλει 551.  
 ἀπαλός 538.  
 ἀπαμείβομαι 324.  
 ἀπαξ 268, 392, 544.  
 ἀπαρχή 190.  
 ἀπάρχομαι 190.  
 ἀπας 392, 685.  
 ἀπαστος 270.  
 ἀπάτη 510.  
 ἀπανράω 345.  
 ἀπαφίσκω 510.  
 ἀπαφός 265, 510.  
 ἀπεδος 392.  
 ἀπείλλω 550.  
 ἀπειρείσιος 273, 646.  
 ἀπέκλειαν 149.  
 ἀπέλεθρος 277, 730.  
 ἀπέλλαι 550.  
 ἀπέλλω 550.  
 ἀπελύκην 161.  
 ἀπενίζοντο 317.  
 ἀπερείσιος 273.  
 ἀπεσπάδατο 652.  
 ἀπεωστόν 580.  
 ἀπήλιος 690.  
 ἀπηλιώτης 399, 690.  
 ἀπήνη 510, 689.  
 ἀπηνης 305, 306.  
 ἀπήαιρος 348.  
 ἀπθιτος 418.  
 Ἀπία, ἀπήγαθα 469.  
 Ἀπιδανός 469.  
 Ἀπιδών 469.  
 ἀπлатος 278.  
 ἀπλετος 277.  
 ἀπλύος 392.  
 ἀπό 263, 383, 469, 726.  
 ἀποαιρείσθαι 557.  
 ἀποαίρεο 557.  
 ἀπόγεμε 614.  
 ἀπόγονοι 267.  
 ἀποδεκνύντες 680, 711.  
 ἀπόδεξις 479, 680, 711.  
 ἀποδρᾶναι 237.  
 ἀπόεικε 135.  
 ἀπόερε 345.  
 ἀπόθεστος 520.  
 ἀποικία 629.  
 ἀποικίζω 629.  
 ἀποικος 629.  
 ἀποικια 281, 472.  
 ἀποκρίνομαι 156.  
 ἀπολαύω 362.  
 Ἀπόλλων 6.  
 ἀπολυνσέμεναι 369.  
 ἀπομύσσω 162.  
 ἀπονέμομαι 314.  
 ἀποξίννυται 706.  
 ἀποσπάδιος 648.  
 ἀποτίνω 472, 489.  
 ἀπούρας 345.  
 ἀποφλύω 301.  
 ἀποφύω 300.  
 ἀπριάτην 649.  
 ἄπτω 510, 689.  
 ἀπύ 716.  
 ἀπύρωτος 508.  
 ἄρ 341, 436.  
 ἄρα 341, 436, 687.  
 ἄρα 341.  
 ἄρά 344.  
 ἄραβος 465.  
 ἄραβύλας 728.  
 ἀρακος 344, 654.  
 ἀράμεναι 325, 724.  
 ἄραμος 345.  
 Ἀράντισιν 344.  
 ἀραρίσκω 46, 339.  
 ἄραρος 345.  
 ἀραρυία 340.  
 ἀρασθαι 340.  
 ἀράχιδνα 654.  
 ἀράχνη 341, 502, 728.  
 ἀράχνης 341.  
 ἀράχνιον 341.  
 ἀραχνός 341.  
 ἀραχος 344, 654.  
 ἀρβύλαι 728.  
 Ἀργαδεις 181, 647, 653.  
 Ἀργαδής 647.  
 Ἀργάδης 647.  
 ἀργαλέος 553.  
 ἀργεννός 172.  
 ἀργής 172.  
 ἀργίλος 172.  
 ἀργινόεις 172.  
 ἀργίποδες 172.  
 ἀργματα 190.  
 ἀργός 172.  
 ἀργυρόηλος 360.  
 ἀργυρόπεζα 618, 670.  
 ἀργυρος 172.  
 ἀργυφός 172.  
 ἀργυφός 172, 527.  
 ἄρδα 114, 229.  
 ἄρδαλος 114.  
 ἄρδαλός 114.  
 ἀρδέω 229.  
 ἀρδην 649.  
 ἄρδης 742.  
 ἀρδμός 229.  
 ἄρδω 114, 229.  
 Ἀρέθουσα 63.  
 ἀρείων 71, 335, 339, 340.  
 ἀρενοβοσκός 728.  
 Ἀρεπύαι 728.  
 ἀρές 340.  
 ἀρέσθαι 149, 340.  
 ἀρέσκω 71, 339.  
 ἀρετάς 339.  
 ἀρετή 71, 339, 340, 728.  
 ἀρέτησαν 728.  
 ἀρήγω 444, 533, 729, 730.  
 ἀρηνοβοσκός 533, 728.  
 ἀρηρα 339.  
 ἀρηράς 71, 339.  
 Ἀρης 340.  
 ἀρθμός 339.  
 ἀρθρον 339.  
 ἀρι- 71, 339, 619.  
 Ἀρια 515.  
 Ἀριάγνη 706.  
 Ἀριάδνη 706.  
 ἀρίζηλος 619.  
 ἀριθμός 339, 341, 489, 728.  
 ἀριμάζω 728.  
 Ἀρίσβη 619.  
 ἀριστεύοντα 570, 599, 656.  
 ἀριστινδην 650.  
 Ἀρίστιππος 462.  
 ἀριστον 401.  
 ἀριστος 71, 339, 401.  
 ἀριφραδής 673.  
 ἀρίφραν 71.  
 ἀρκάνη 341.  
 ἀρκέω 132.  
 ἀρκίλος 133.  
 ἀρκιος 132, 533.  
 ἀρκος (protection) 132.  
 ἀρκος (bear) 133, 698.  
 ἀρκτος 132, 133, 431, 698.  
 ἀρκυν 341.  
 ἀρκυς 341, 728.  
 ἄρμα 690.  
 ἄρμενος 47, 71, 339.  
 ἀρμύζω 340, 675, 728.  
 ἄρμοι 340.  
 ἀρμονία 340.  
 Ἀρμοξίδαμος 690.  
 ἀρμός 339, 340.  
 ἀρμόττω 675.  
 ἀρνεύς 276, 344, 345.  
 ἄρνειος 345.  
 ἄρνες 344.  
 ἀρνημαί 149, 340.  
 ἄρος 340.  
 ἀροτήρ 341.  
 ἀροτος 341.  
 ἀροτρον 341, 501, 709.  
 ἀροῦμαι 340.  
 ἀρούρα 341, 342.  
 ἀρώ 46, 341, 554.  
 ἀρπαγή 263.  
 ἀρπάγη 263.  
 ἀρπάζω 263.  
 ἀρπαλέος 263, 264.  
 ἀρπαξ 263, 534.  
 ἀρπεδόνη 340.  
 ἀρπεδών 340.  
 ἀρπη (bird of prey) 263.  
 ἄρπη (sickle) 263.  
 ἀρπίδες 728.  
 Ἀρπυιαί 263, 728.  
 ἄρβην 342.  
 ἄρσα 339.  
 ἀρσεια 298, 356.  
 ἀρσεις 342.

- ἀρσενικός 342.  
 ἄρσην 342, 345.  
 Ἄρταμίτιον 536.  
 Ἄρταμίτιος 536.  
 Ἄρτεμις 536.  
 ἄρτι 71, 339.  
 ἀρτιεπής 71.  
 ἀρτίζω 339.  
 ἄρτιος 71, 339.  
 ἀρτίφρων 71.  
 ἀρτοκόπος 465.  
 ἀρτοπόπος 465.  
 ἀρτύς 339.  
 ἀρτύω 339.  
 ἀρύτω 677.  
 ἀρύω 677.  
 ἀρχαῖος 189.  
 ἀρχή 189, 190.  
 ἀρχηγός 170.  
 ἀρχματα 190.  
 ἀρχομαι 106, 190.  
 ἀρχός 189.  
 ἀρχουριν 453.  
 ἀρχω 106, 189, 190.  
 ἀρχων 189.  
 ἀρῶ 340.  
 ἀρωγή 533.  
 ἀρωγός 533.  
 ἄς 397.  
 ἄσαι 397.  
 ἄσαμεν 400.  
 ἄσβολος 700.  
 ἄσεκτος 696.  
 ἄσθμα 387.  
 ἄσκοίρω 721.  
 ἀσκήνην 505.  
 ἀσκαρίζω 721, 722.  
 Ἀσκληπιός 7, 728.  
 ἄσμενος 229, 686.  
 ἀσπαίρω 287, 721.  
 ἀσπάλω 106, 503.  
 696, 700, 721, 722,  
 730.  
 ἀσπάραγος 382, 503,  
 700, 722.  
 ἀσπερχέει 195.  
 ἀσπίθιον 699.  
 ἀσπίλος 276.  
 ἄσσα 609, 722.  
 ἄσσα 490, 609, 722.  
 ἄσσαν 191.  
 ἀσσοτέρω 191.  
 ἄσσω 674.  
 ἀσταθής 211.  
 ἀστακος 209.  
 ἀσταφίς 213, 721 (bis).  
 ἀσταχυς 721 (bis).  
 ἀστέιος 206.  
 ἀστέλεφος 730.  
 ἀστεμφής 212, 528.  
 ἀστερόεις 206.  
 ἀστήρ 206, 216, 721.  
 ἀστός 206.  
 ἀστραγάλις 209.  
 ἀστράγαλος 209.  
 ἀστράλως 355, 451,  
 722.  
 ἀστραπή 721.  
 ἀστράπτω 206, 233,  
 540, 721.  
 ἀστρινής 721.  
 ἀστρίζω 209.  
 ἀστρίς 209.  
 ἀστριχος 209.  
 ἀστρον 206.  
 ἀστύ 79, 206, 411.  
 ἀσσίφηλος 512.  
 ἀσφάδατος 247.  
 ἀσφάλω 503.  
 ἀσφαλής 372.  
 ἀσφάραγος (wind-  
 pipe) 186, 722.  
 ἀσφάραγος (aspara-  
 gus) 382, 503.  
 ἄσφε 722.  
 ἄσφι 721, 722.  
 ἀσχαλάαν 193.  
 ἀσχάλλω 193.  
 Ἄσωπόλαος 185.  
 ἄσωτος 378.  
 ἄτα 403.  
 ἀτάλαντος 220, 221.  
 ἀτάρ 741.  
 Ἄταρπώ 468.  
 ἀτεινής 195, 217.  
 ἀτέρ 741.  
 ἀτη 386.  
 Ἄτη 121.  
 Ἄτθις 667.  
 ἀτίω 651.  
 ἀτίτης 645.  
 ἀτίω 651.  
 Ἄτλας 723.  
 ἀτμή 62.  
 ἀτμός 62, 387, 388.  
 ἄτος 397, 398.  
 ἄτρακτος 432, 468,  
 723.  
 ἄτρεκτος 455.  
 ἀτρεκίως 468.  
 ἀτρεκίης 468.  
 ἀτρέμας 225.  
 ἀτρεστος 225, 721.  
 Ἄτρεύς 721.  
 ἀτρεχής 468.  
 ἀτρήεις 721.  
 Ἄτροπος 468.  
 ἀτρύγετος 598.  
 ἀτρυνήφάγος 723.  
 ἀτρίνων 721.  
 ἀτρυτος 598.  
 Ἄτρυτώνη 598.  
 ἄττα (τινά) 722.  
 ἄττα (παρ) 207.  
 Ἄττικη 657.  
 αὐαλέος 393, 689.  
 αὐάτα 386, 569,  
 598.  
 αὐγάσθαι 113.  
 αὐγή 113.  
 (αὐγόν 391, 612,  
 740.)  
 αὐδή 248.  
 αὐέλλα 387, 566.  
 αὐέρυσαν 566.  
 αὐετή 208, 566, 577.  
 αὐήρ 387.  
 αὐθις 524.  
 αὐίαχοι 566, 576.  
 αὐιδετοῦ 566.  
 αὐλαξ 136, 566, 579,  
 582.  
 αὐλή 387.  
 αὐληρον 568, 582.  
 Αὐλῖς 640.  
 αὐλός 387, 646.  
 αὐλῶν 646.  
 αὐξάνω 64, 383, 549.  
 αὐξη 383.  
 αὐξήμα 383.  
 αὐξήσις 383.  
 αὐξω 64, 383.  
 αὐος 393.  
 αὐρα 248, 386, 403.  
 αὐρηκτος 566.  
 αὐριον 400.  
 αὐσαι 388.  
 αὐσας 388.  
 αὐστηρός 393, 689.  
 αὐτάγρετος 170.  
 αὐτάρκης 533.  
 αὐτέω 388.  
 αὐτή 388 (bis), 434.  
 (αὐτί 403.)  
 αὐτίς 524.  
 αὐτμή 387.  
 αὐτμήν 62, 387,  
 388.  
 αὐτόκαρνος 148.  
 αὐτοκράτωρ 154.  
 αὐτός 543.  
 αὐτοσχεδᾶ 649.  
 αὐτοσχεδῆς 658.  
 αὐτοσχεδῆν 648.  
 αὐφήν 482, 592,  
 593.  
 αὐχέω 702.  
 αὐχὴν 482.  
 αὐχμός 393, 702.  
 αὐω (call) 62, 388.  
 αὐω (dry) 393, 670,  
 702.  
 αὐω (kindle) 398,  
 702.  
 αὐωας 399, 400, 566,  
 690.  
 ἀφαιλησέσθαι 557.  
 ἀφαιρείται 557.  
 ἀφαρος 298.  
 ἀφάσω 510.  
 ἀφάω 393.  
 ἀφενος 430, 510,  
 730.  
 ἀφεος 296.  
 ἀφέσταλκα 685.  
 ἀφή 11, 510.  
 Ἀφιδναίς 633.  
 ἀφλαστον 722.  
 ἀφλοισμός 723.  
 ἀφνειός 430, 510,  
 730.  
 ἀφνίς 680.  
 ἀφνος 510.  
 ἀφνύνω 510.  
 ἀφνύω 510.  
 ἀφνω 502, 680.  
 ἀφορμή 347.  
 ἀφραίνω 628.  
 ἀφρός 338, 538.  
 ἀφύζας 620.  
 Ἀχαιοί 359.  
 Ἀχελῷος 119.  
 ἀχέω 190.  
 ἀχέων 524.  
 ἀχὴν, ἀχηνία 191.  
 ἀχθομαι 63, 69, 190.  
 ἀχθος 63, 190, 191.  
 Ἀχιλῆος 119.  
 ἀχλὺς 119, 502.  
 ἀχνη 502.  
 ἀχυνμαι 119, 190.  
 ἀχομαι 190.  
 ἀχος 15, 63, 119,  
 190, 191, 521.  
 ἀχρ(ι) 191, 595.  
 ἄψ 263, 293, 383.  
 ἄψεκτος 696.  
 ἀψίνθιον 699.  
 ἀψίς 510, 639.  
 ἄψορρος 556.  
 ἄψος 298, 356.  
 ἄω (satisfy) 386,  
 685.  
 ἄω (breathe) 386,  
 387.  
 ἄωρος (pendulus)  
 348.  
 ἄωρος (untimely)  
 355, 613.  
 ἄως 690.  
 β = Indogerm. b 290;  
 = g 472; = bh 158,  
 530 f.; β from f  
 254, 583 ff., 650;  
 β before p, λ from  
 μ 230.  
 βαβέλως 400.



- Βαγαῖος 297.  
 βαβάκτης 576.  
 βάγιος 171.  
 βάθην 648, 649.  
 βαδίζω 472, 473.  
 βάδιστοι 285.  
 βάδος 472, 473.  
 βάζω 531, 589.  
 βαθμῖς 589.  
 βαθμός 353.  
 βάθος 473, 527.  
 βάθρον 114, 241, 472, 473.  
 βαθύς 473, 474, 589, 716.  
 βαῖκαν (?) 172.  
 βαῖκαν 394.  
 βαίνω 61, 64, 114, 458, 472, 473, 476, 545, 605, 729.  
 βαῖος 541.  
 Βακεύφα 570.  
 βάκτρον 61.  
 βάκχος 460, 576.  
 βάλανος 474, 475.  
 βαλβίς 589.  
 βαλκιάτης 396.  
 βάλλω 459, 474, 475, 491, 538, 548, 606, 664.  
 βάμμα 474.  
 βανά 175, 479, 714.  
 βάπτω 474.  
 βαραγγιάν 728.  
 βαράγγιον 728.  
 βάραγγος 728.  
 βάραθρον 478, 491.  
 βάρβαξ 576.  
 βαρβαρίζω 290.  
 βάρβαρος 290, 291, 555.  
 βαρβαρόφανος 291.  
 βάρδιστος 230.  
 βαρέω 475.  
 βάριον 344.  
 βάριχοι 344.  
 βάρναμαι 338.  
 βαρνάμενον 596.  
 βάρος 475.  
 βαρραχίω 728, 729.  
 βαρύθει 63.  
 βαρύσπαν 460.  
 βαρύς 176, 475, 491, 533.  
 βαρυσφάραγος 186.  
 βαρύτης 475.  
 βάσανος 439.  
 βασιλεύς 119, 362.  
 βασιλεύω 585.  
 βασιλυνά 653.  
 βασιλῖς 641.  
 βάσις 114, 241, 472.  
 βασκαίνω 531.  
 βάσκε 62, 472, 473.  
 βάσκ' ἴθι 98.  
 βάσσαι 474.  
 βάσσαν 669.  
 βαστάζω 476.  
 βατεῖν 541.  
 βατήρ 473.  
 βατός 472.  
 Βαυκεδύς 647.  
 βαφεύς 474.  
 βαφή 474.  
 Βαφύρας 474.  
 βδάλλω 230.  
 βδέλλα 229, 230.  
 βδέλλω 173.  
 βδελυρός 230.  
 βδελύσσω 230.  
 βδέσμα 230.  
 βδέω 230, 499.  
 βδόλος 230.  
 βδύλλω 230.  
 (Βέασα 608.)  
 βέβαιος 472, 473.  
 βέβηλος 472, 473.  
 βεβρώθω 63, 477.  
 βέδω 249.  
 βειέλοπες 564.  
 βείκατι 135.  
 βειλαρμοστάς 564.  
 βείλῃ 550, 564.  
 βείομαι 476, 477.  
 Βεῖτουλος 575.  
 Βεῖτυλος 575.  
 βέλα 552.  
 βέλεμον 430, 474, 475.  
 βέλλειν 596.  
 βελόνη 474, 483.  
 βέλος 474, 483.  
 βέλτερος 550.  
 βελτίων 550.  
 βελφίς 479, 483.  
 Βελφοί 479, 483.  
 βένθος 478, 504, 527, 716.  
 βέομαι 476, 477.  
 βέργον 454.  
 Βερέκυνθος, Βερέκυντος 505.  
 βέρρης 345, 557.  
 βέστον 376.  
 Βευχίσιατρατος 702.  
 βῆ ἵεναι 98.  
 βήλημα 550.  
 βηλός 472, 589.  
 βῆμα 472, 473.  
 βηράνθεμον 388.  
 Βήσαζε 633.  
 βήσσα 473, 474, 589.  
 βία 13, 476, 589.  
 βιάζομαι 476.  
 βίαιος 476.  
 βιάω 476.  
 βιβάζω 401, 472.  
 βιβάς 472, 473.  
 βιβάσθω, -ων 63, 472.  
 βιβρώσκω 61, 477, 712.  
 βίβει 242, 565.  
 βίβνυ 242, 565.  
 βικίον 343, 588.  
 βίκος 588.  
 βικρός 541.  
 βινέω 476.  
 βίος 459, 476, 477.  
 βιός 477.  
 βιοτή 476.  
 βίσιος 476, 477.  
 βίστος 647.  
 βιώω 476.  
 Βίσα 280.  
 βίσχυν 389.  
 βίτσι (Alban.) 208.  
 βίττι (Alban.) 208.  
 βίτνυ 389.  
 βίαιρ 378.  
 βλαβερός 558, 642.  
 βλαβή 538.  
 βλάβομαι 538.  
 βλαδόν 230.  
 βλάξ 326, 538.  
 βλάπτω 369, 423, 676.  
 βλαστώνω 549, 588.  
 βλάστη 549.  
 βλαστός 549.  
 βλέπτω 670.  
 βλέπω 13, 102, 70.  
 βλέφαρον 481, 505, 511, 642.  
 βλήφουρα 492.  
 βλήμα 474.  
 βλήμενος 474.  
 βλήρ 237, 483.  
 βλητός 474.  
 βληχάομαι 291, 702.  
 βληχάς 291.  
 βληχή 291.  
 βληχρός 326, 501.  
 βλήχων 481, 483.  
 Βλισσήν 367, 575.  
 βλοσυρός 549.  
 βλοσυρώπις 638.  
 βλύζω 531.  
 βλύνω 531, 558.  
 βλωθρός 549.  
 βλώσκω 538.  
 βοαθήσιω 607.  
 βοάω 477.  
 βοή 477.  
 βοηδρόμος 256.  
 βοηθός 256.  
 βόθρος 262, 474.  
 βοικία 163.  
 βολβός 291.  
 βόλε 550.  
 βόλεται 549, 550.  
 βολή 52, 474.  
 βολίς 474.  
 βολλά 550, 551.  
 Βολοέντιοι 360, 515, 584.  
 βόλος 474.  
 βομβυλίς 291.  
 βορά 477.  
 βορβορύζω 291.  
 βορεάδης 645, 646.  
 βορέας 348, 609, 643, 644, 646.  
 Βορέας 213, 643, 644, 646.  
 βορέιν 46.  
 Βόρειος 609.  
 βόρμαξ 337.  
 βορός 477.  
 Βορβός 213, 348, 609.  
 βορσόν 348.  
 βοσπέσκοτο 707.  
 βόσσω 540.  
 βόστρυχος 703.  
 βότρως 703.  
 βότρυχος 703.  
 βοτρυχώδης 703.  
 βουβαλῖς 478.  
 βουβαλος 478, 586.  
 βούεσι 568.  
 βουκόλος 148, 470.  
 βουλεύω 549.  
 βουλή 549, 550, 551.  
 βούλημα 549.  
 βούλησις 549.  
 βούλομαι 60, 443, 549, 550, 584, 726.  
 βούς 92, 459, 478, 578.  
 βουστροφηδόν 488.  
 βούφαρος 298.  
 βούπις 638.  
 βρά 303.  
 βραβεύς 541.  
 βραγγιάν 728.  
 βραδινός 352, 530.  
 βραδύς 230, 672.  
 βραδύτης 230.  
 βράδων 113, 230.  
 βράζω 587.  
 βρακεῖν 463.  
 βρακίαι 542.  
 βράκος 160, 542.  
 βράνα 229.  
 βράξαι 463.  
 βράπτειν 463.

- Βρασίδας 587.  
 Βρασίλας 587.  
 βράσμα 587.  
 βρασμός 587.  
 βράσσω 531, 587, 672.  
 βράσσαν 291, 672.  
 βράστης 587.  
 βρατάνη 587.  
 βράχεια 291.  
 βραχύνω 728, 729.  
 βράχιστος 291.  
 βραχίων 221.  
 βραχύνω 291.  
 βραχύς 291, 521, 672.  
 βραχύτης 291.  
 βρέγμα 531.  
 βρέμβος 527.  
 βρέμω 530, 531.  
 βρενθύομαι 475.  
 βρέτας 587.  
 βρέφος 459, 478, 479, 492, 527.  
 βρεχμός 531.  
 βρέχω 191, 587, 715.  
 βρήτωρ 343, 443.  
 βρί 475.  
 Βριάρεως 227, 723.  
 Βριαρός 348, 475, 532.  
 Βρία 586.  
 Βρίζω 475.  
 Βριήπιος 348.  
 Βριθύς 475.  
 Βρίθω 63, 475, 532, 713.  
 Βρίμη 533.  
 Βριμός 532.  
 Βριμώ 723.  
 Βρίσδα 352.  
 Βρόδον 352, 586.  
 Βρόμος 530.  
 Βροντή 530.  
 Βρόσσαν 672.  
 Βροτός 93, 230, 307, 331, 594.  
 Βροχετός 191.  
 Βροχή 191.  
 Βρόχος 587.  
 Βρύκω 61.  
 Βρύτηρ 345.  
 Βρύττον 531.  
 Βρυχάομαι 714.  
 Βρύω 531, 558, 587.  
 Βρώμα 477.  
 Βρώσις 11.  
 Βρωτήρ 477.  
 Βύας 291.  
 Βύα 291.  
 Βυζάντιον, Βύζας 291.  
 Βύζην 649.  
 Βυζών 649.  
 Βυθός 262, 473, 716.  
 Βυνέω 649.  
 Βύρμαξ 337, 338.  
 Βύρμηξ 596.  
 Βύσιος 262, 541.  
 Βυσσός 262, 473, 716.  
 Βώδων 484.  
 Βωλά 550.  
 Βώλαξ 275, 655.  
 Βάλομαι 550.  
 Βωμής 473.  
 Βωμός 472, 473.  
 Βωρθία 348.  
 Βώροι 347.  
 Βώς 578.  
 Βωτιάνεира 433.  
 γ access. 62; = Indo-germ. g 170; from f 596 ff.; from j 612 ff.; from k 326, 334, 371, 379, 533 ff.  
 γά 526.  
 γά 492.  
 γαβέργος 181.  
 γαδύνω 229.  
 γάδεσθαι 229, 597.  
 γαία 177.  
 γαίος, γαιός 478.  
 γαίω 172, 517.  
 γάλα 172, 173.  
 γαλαθηνός 172, 173, 252.  
 γάλατι 173.  
 γαλήνη 172, 173.  
 γαλιδεύς 647.  
 γάλλος 360.  
 γαλοάνη 173.  
 γαλόως 173, 174, 575.  
 γάλος 173, 575, 578.  
 γαμβρός 175, 546.  
 γαμέτης 546.  
 γαμέω 65, 546.  
 γαμήλιος 546.  
 γάμος 65, 175, 546, 547.  
 γαμφή 174.  
 γαμφηλή 174.  
 γανάω 172.  
 γάνος 172.  
 γάνυμα 172.  
 γάρ 687.  
 γαργαίρω, γάργαρα 174.  
 γαργαρέων 478.  
 γαργαρίζω 478.  
 γάρως 173.  
 Γαρυφόνης 570.  
 γάσσα 672, 673.  
 γαστήρ 174, 479.  
 γάστρα 174.  
 γαυλός 174.  
 γαῦλος 174.  
 γαῦρος 172, 176.  
 γδοῦπος 72, 698.  
 γέ 397, 526.  
 γέαρ 388.  
 γεγάσι 175.  
 γεγαώς 65, 175.  
 γέγηθα 64, 172, 251.  
 γέγκαλον 136.  
 γέγονα 105.  
 γείνομαι 175.  
 γείτων 177.  
 γεκαθά 136.  
 γέλαν 552.  
 γέλαρος 173.  
 γελάω 173.  
 γέλγυς 175.  
 γελέω 173.  
 γέμματα 376, 597, 598.  
 γέμων 547.  
 γενεά 610.  
 γένειον 307.  
 γένεσις 175.  
 γενέτειρα 175.  
 γενετήρ 73, 175.  
 γέννα 175.  
 γενναίος 179, 431.  
 γεννάω 431.  
 γεννόν 311.  
 γένος 45, 73, 74, 175, 587, 656.  
 γένου 614.  
 γέντερ 174, 600.  
 γέντο 614.  
 γένυς 307, 525.  
 γεραίος 176.  
 γεραίρω 176.  
 γεράνδρουν 176.  
 Γεράνεια 175.  
 γεράνιον 175.  
 γέρανος 175, 178.  
 γεραρός 176.  
 γέρας 176, 475, 587.  
 γέργεραι 174.  
 γεργέριμος 176.  
 γέργερως 478.  
 γερήνιος 176.  
 γέραν 11, 46, 114, 176.  
 γίστρα 376.  
 γέτορ 208.  
 γεῦμα 177.  
 γεύνων 180, 682.  
 γεῦσις 177.  
 γεύω 177, 361, 398, 661.  
 γέφυρα 174, 492.  
 γῆ 177, 492.  
 γηθέω 64, 172, 251, 673.  
 γῆθος 172.  
 γηθοσύνη, γηθόσυνος 172.  
 γήϊνος 177.  
 γηίτης 177.  
 γηλουμένοις 550.  
 γῆμα 376, 598, 712.  
 γηραλέος 176.  
 γῆρας 114, 176.  
 γηράσκω 176.  
 γῆρυς 177.  
 γηρύω 46, 177.  
 Γηρυών 177, 178.  
 γία 388.  
 γίapes 388.  
 γίγας 175.  
 γίγνομαι 175, 305.  
 γιγνώσκω 92, 178.  
 γίνυμαι 175.  
 γίξαι 135.  
 γίς 389.  
 γισγόν 378.  
 γίσχυν 389.  
 γιτέα 389.  
 γιτάγος 172, 173.  
 γλακκόν 173.  
 γλακτοφάγοι 173.  
 γλακῶντες 173.  
 γλαμάω 552.  
 γλαμυρός 552.  
 γλάμαν 552.  
 Γλαυκίπιος 690.  
 γλαυκός 178.  
 γλαυκῶπις 178.  
 γλαῦξ 178.  
 γλαυσόν 178.  
 γλαύσσω 178.  
 γλάφυ 56, 178.  
 γλαφυρός 56, 178.  
 γλάφω 56, 178, 180.  
 γλεῦκος 358.  
 γλέφαρον 481.  
 γλήνη, γλήνος 178.  
 γλήχων 481, 483.  
 γλία 367.  
 γλίσχρος 367, 702.  
 γλιττόν, γλίττον 367.  
 γλίχομαι 702, 710.  
 γλοιά 367.  
 γλοιός 367.  
 γλούρεα, γλουρός (Phryg.) 204.  
 γλουτός 150.  
 γλυκερός 358.  
 γλύκκα 164.  
 γλυκὺς 358, 717.  
 γλυκὺτης 358.



- γλύπτῃς 178.  
 γλύφανος 178.  
 γλύφω 56 f., 178, 180, 703.  
 γναβμός 63, 307.  
 γνάθος 63, 307.  
 γνάμπτω 536.  
 γνήσιος 175, 648.  
 γνίφων 511, 703, 706.  
 γνοείω 179.  
 γνώφαλλον 535.  
 γνώφος 492, 535, 704, 706.  
 γνύξ 179.  
 γνυπετεῖν, γνύπετοι 180.  
 γνώμη 178.  
 γνώμων 179, 705.  
 γνωρίζω 178, 179.  
 γνώσις 75, 178.  
 γνώσκω 179.  
 γνωστός, γνωτός 178.  
 γοάω 477.  
 γογγύζω 179, 619.  
 γογγύλος 174.  
 γογγυσμός 179.  
 γότης 477.  
 γόμος 547.  
 γομφίος 174.  
 Γόμοφοι, γόμοφος 174.  
 Γομεῖς 569.  
 γόνονα 665.  
 Γόννοι 180, 569.  
 Γοννούσσα 180.  
 Γονόεσσα 569.  
 γόνος 52, 656.  
 γόνυ 179, 239, 307, 403.  
 γόος 477, 740.  
 γοργός 742.  
 γόρτυξ 349.  
 γουάναξ 598.  
 γουελένα 598.  
 γούνα 275, 371, 569, 682.  
 γουνάζομαι, γουνό-ομαι 179.  
 γουνός 180.  
 γούρηις 598.  
 γρά 478.  
 γράβδην 649, 676.  
 γραῖα 176.  
 Γραῖκοι 176.  
 Γράμμα 180.  
 γραμματί-δω, -δω 623.  
 γραμμή 180.  
 γραπτός 418.  
 γράσος, γράσος 526.  
 γράστις 536.  
 γραῦς 176.  
 γραῦκαλος 176.  
 γραῦς 176, 313.  
 γραφή 180.  
 γραφίς 180, 642.  
 γράφω 57, 165, 180, 703.  
 γράω 478.  
 γρηῖς 178, 226, 245.  
 γρίνος 567.  
 γρίπος 352, 511, 703.  
 γρίφος 352, 511.  
 γρομφάς 180, 703.  
 γρόφος 180.  
 γρύ 176, 714.  
 γρύττη 703.  
 γρώνη 296.  
 γύα 177.  
 Γυγάδας 646.  
 γυμνάξω 642, 644.  
 γυμνάς, γυμνός 644.  
 γυναικονόμος 314.  
 γυνή 175, 177, 311, 639, 679, 714.  
 γύπη 159.  
 γύρις 114, 176, 714.  
 γωνία 180, 239.  
 δ accessory 62, 654; from γ (γ, β, ζ) 490; from J 636 ff.; from dh 527; δ, δδ from dj 620 ff.; δ with parasit. j 661 ff.  
 δα 492, 620.  
 δαβεί 231.  
 δαβελός 231.  
 Δαγκλη 621.  
 δάγκολον 621, 730.  
 δαδύσσεσθαι 135.  
 δάελον 236.  
 δάφιος 231.  
 δαήμων 230.  
 δαῖναι 230.  
 δαῖρ 231, 517.  
 δαί 231.  
 δαιδάλεος, δαίδαλος, δαίδαλα, δαιδά-λω 232, 633, 680.  
 δαδύσσεσθαι 135.  
 δαίξω 110, 230.  
 δαίμων 231, 544.  
 δαίνυμι 230.  
 δάιος 232.  
 δαίρω 235.  
 δαῖς (torch) 198, 231.  
 δαῖς (meal) 60, 114, 230, 233, 331.  
 δαίτη 230.  
 δαιτρός 230.  
 δαιτυμών 230, 281.  
 δαιτός 230.  
 δαίφρων 230.  
 δαῖω (kindle) 231, 577.  
 δαῖω (apportion) 60, 110, 114, 145, 230, 231, 233, 607.  
 δάκνω 64, 133.  
 δάκος 133.  
 δάκρυ 75, 133, 442, 655.  
 δάκρυον 75, 133, 572, 655.  
 δακρυπλύνειν 279.  
 δακρύω 133.  
 δάκτυλος 64, 75, 114, 133.  
 Δαλῖαν 621.  
 δᾶλον 621.  
 δαλός 231.  
 δαμάξω 232.  
 δαμάλης 232.  
 δάμαρ 232.  
 Δαμάτηρ 492.  
 δαμάω 65, 232.  
 δαμῶω 621.  
 Δαμναμενός 641.  
 δάμνημι 232, 677.  
 -δαμος 232.  
 δάν 620.  
 δάνας 237.  
 δανείζω 237.  
 δάνειον 237.  
 δάνος 237.  
 δαπάνη, δάπανος 60, 114, 232.  
 δάπεδον 622.  
 δάπις 536.  
 δάπτω 60, 232, 233.  
 Δαρδανίς 641.  
 δαρθάνω 63, 233.  
 δάρις 235.  
 δάρκες 492.  
 Δάρβων 256.  
 δάρυλλος 239, 728.  
 δασκάζει 285.  
 δάσκιος 621.  
 δασκόν 233.  
 δασμός 230.  
 δάσος 233.  
 δασπέταλον 233.  
 δασπλήτης 278.  
 Δασύλλιος 233.  
 δασύνω, δασύν 233.  
 δατέν 621.  
 δατέομαι 230.  
 Δαυλῖς, δαυλός 233.  
 δαύχνη 482, 574.  
 δαύω 387, 637, 660.  
 δάφνη, Δάφνη 482, 574.  
 δαφονός 621.  
 δαφιλῆς 232, 233.  
 -δε 233.  
 δέαμαι 573.  
 δέαμην 573.  
 δέαται, δέατοι 573.  
 δέατο 236, 517, 573.  
 δεδάσθαι 230.  
 δέδαε 230, 401.  
 δεδαγμένον 231.  
 δεδανυμένος 231.  
 δεδαώς 230.  
 δέδηα 231.  
 δεδοίκα 623.  
 δέδορκα 101.  
 δεδροικώς 455.  
 δέδρομα 238.  
 δέελος 236.  
 δέησει 234.  
 δειγμα 134.  
 δειδήμονες 623.  
 δέδια 61, 236, 623, 663.  
 δειδίσσομαι 61.  
 δέιδω 623.  
 δέικνυμι 114, 115, 134.  
 δέιλεσθαι 234.  
 δειμαίνω 628.  
 δειμός 121.  
 δειν 234.  
 δεινός 74, 663.  
 δειξίς 134.  
 Δειπάτωρος 617, 715.  
 δειπνών 60, 114, 232, 233, 680.  
 δειράς 235.  
 δειρή 235.  
 δειρός 235.  
 δείρω 235.  
 δεισθαι 234.  
 δεισιλός 233.  
 δέκα 92, 133, 134, 507.  
 δεκάξω, δεκάν 507.  
 δέκομαι 64, 115, 133, 507, 524.  
 δέλεαρ 237, 483.  
 δέλλω 491.  
 δέλφαξ 479.  
 δελφίς 479.  
 Δελφοί 479.  
 δελφύς 478, 479, 491, 492.  
 δέμας 65, 234.  
 δέμω 65, 234, 317.  
 (δέν 442.)  
 δενδύλλω 234.  
 δένδρεον, δένδρον 143, 238, 239.  
 δενδρύνω 239.  
 δεξαμενή 133.

- δεξιός 64, 133, 235.  
 δεξιτερός 235.  
 δέος 236, 663.  
 δεπάζω 233.  
 δέπας, δέπαστρον 233.  
 δέργμα 134.  
 δέρεθρον 491.  
 δέρη 235, 434.  
 Δέρκιππος 690.  
 δέркоμαι 61, 100, 101, 113, 134.  
 δέρμα 235.  
 δέρος 235.  
 δέββα 235.  
 δέββης 235.  
 δέρτρον 235.  
 δέρω 235.  
 δέσις 234.  
 δεσμός 234.  
 δεσπύζω 282, 283.  
 δέσποινα 282, 653.  
 δεσπόσυρος 282.  
 δεσπότης 234, 282.  
 δετή 234.  
 δεύασθαι 491.  
 δεύκος 358, 492.  
 Δεύνυσος 609.  
 Δεύξίππος 621.  
 Δεύς 620, 636.  
 δεύτερος 239.  
 δεύω 234.  
 δέφω 64.  
 δέχομαι 115, 218, 507, 524.  
 δέψω 64.  
 δέω 65, 234, 317.  
 Δφεινίας 236, 663.  
 δῆγμα 133.  
 δηθά 573.  
 Δῆθος 621.  
 δῆϊος, δῆϊότης, δῆϊώω 231.  
 Δηφόβος 520.  
 δῆλεσθαι 234.  
 δῆλος 236, 589, 619.  
 Δημήτηρ 492.  
 Δημοεργός 181.  
 δῆμος 655.  
 Δημοκόων 152.  
 δῆμος 231.  
 δημόσιος 634.  
 δημότης 698.  
 Δημοφάτων 297.  
 δῆν 572, 573, 619, 621.  
 Δῆν 620.  
 δηναιός 573.  
 δῆνος 230, 346.  
 δηράς 235.  
 δηριάσθαι 235.  
 δῆρις 235.  
 δηρόν 572, 573.  
 δητώμεν 622.  
 δῆω 230.  
 δι- 239.  
 διά 33, 37, 239, 617, 618, 621.  
 δια 236.  
 διαβέτης 208.  
 διαγιγνώσκω 37.  
 διαγλαύσσουσιν 178.  
 διάδημα 234.  
 διαῖναι 37.  
 διαθηγή 534.  
 διαθιγή 534.  
 διαίνω 29.  
 διακατίοι 135.  
 διακεκρίδεται 652.  
 διακεχλιδώς 656.  
 (διάκι 624.)  
 διακόσιοι 135, 618.  
 Διακρία 618.  
 διάλας 236, 619.  
 διάλος 236, 619.  
 διαμμος 617.  
 διαμπερές 715.  
 διαμφίδιος 293.  
 Δίαν 616.  
 διανέκης 308.  
 διανεκώς 618.  
 διανθής 617.  
 διαπελάγιοι 34.  
 διαπέφλοιθεν 301.  
 διαπρύσιος 617, 715.  
 διάπυρος 618.  
 διαπρώξ 542.  
 διασκηνίπτω 731.  
 διασωπάσσομαι 740.  
 διάτορος 222.  
 διαττᾶν 379, 667.  
 διαφέρω 106, 300.  
 (διαφυλάγω 623.)  
 διαφυλάδεν, διαφυλά-  
 δαν 623.  
 διδάσκαλος 54, 702.  
 διδάσκω 54, 230.  
 διδῆμι 65, 234.  
 διδράσκω 237.  
 διδυμος 493.  
 διδωμι 237, 712.  
 δίδειμι 37.  
 δίδεμαι 236.  
 δίδεω 460.  
 διερός 116, 236.  
 δίζημαι 626.  
 δίζομαι 626.  
 δίζω 626.  
 διηνεκής 308.  
 διήρης 342.  
 διπετής, διπέτης 210.  
 δικάζω 629, 630, 644 (bis).  
 δίκαιος 6.  
 δικάειν 134.  
 δικάλλα 621.  
 δίκη 134.  
 Δίκτυον 653.  
 δίκτυς 653.  
 διενύω 236.  
 δινέω, δίνω 236.  
 δίνος 236.  
 δίων 236.  
 Διόνυσος 609, 617.  
 Διοπίθης 610.  
 δίος 236, 516, 519, 616.  
 δῖς 37, 239.  
 -δῖς 233.  
 Δῖς 617.  
 δίσκουρα 346.  
 δισσός 239.  
 διφούρα 492.  
 δίχα, διχθά 239.  
 διχθαδῖος 634, 651.  
 δίψα 79.  
 διψάρα 704.  
 δίψιος 224.  
 Διώνη 236.  
 διώρνε 349.  
 (δῖαθός 624.)  
 δμώς 232.  
 δνοφερός 706.  
 δνόφος 492, 535, 704, 706.  
 δοάν 519, 572, 573, 588, 619, 621.  
 δοάσαστο 236, 573.  
 δοῖδυς 135.  
 δοιή 239.  
 δοιοί 239, 573.  
 δοκάνη 115, 133, 507.  
 δοκάς 115, 133, 507.  
 δοκέω 134.  
 δοκιμάζω 614.  
 δοκιμος 614.  
 δολιχός 183, 191, 730.  
 δόλιχος 191.  
 δόλος 237.  
 δολφός 479, 491.  
 δόμα 321.  
 δόμορτις 232.  
 δόμος 65, 163, 234.  
 δόξα 134.  
 δορά 235.  
 δορκάς 101, 134, 662.  
 δόρξ 663.  
 δορός 726.  
 δόρυν 238, 717.  
 δός 191.  
 δόσις 237.  
 δοτήρ 73, 237.  
 Δουλίχιον 191.  
 δοῦλος 234.  
 δοῦπος 698.  
 δοῦρα 569.  
 δουράτεος 238.  
 δούρειος 238.  
 δουρηνεκής 263, 308.  
 δουρί 682.  
 δοχείον 133.  
 δοχή, δοχός 133.  
 δοχητή 115, 133.  
 δράγμα, δραγμῖς 492, 493.  
 δρακοντόμαλλος 592.  
 δράκων 101, 134, 464.  
 δράμα 238.  
 δράνος 238.  
 δράξ 492, 493.  
 δραπέτης 233, 238.  
 δράπων 238.  
 δρασμὸς 237.  
 δράσσομαι 492.  
 δραχμῖς 492, 493, 727.  
 (δραχμῖς 727.)  
 δράω 238.  
 Δρέκανον 493.  
 δρέπανον, Δρέπανον 144, 493.  
 δρέπω 493.  
 δρηστήρ 238.  
 δρηστοσύνη 238.  
 δρία 238, 717.  
 Δρίον 239.  
 δροκτάζεις 134.  
 δρομάς 644.  
 δρομεύς 238.  
 δρόμος 238.  
 δροστήτα 307.  
 Δρύας 239.  
 δρυμά, δρυμός 238.  
 Δρύσις 239, 276.  
 Δρύς 239.  
 δρύς 238, 717, 728.  
 δρυτόμος 238.  
 δρίφακτος 302.  
 δράψ 307.  
 δυνάω 232.  
 δυγόν 621.  
 δυερός 232.  
 δύνεσι 239.  
 δύν 232.  
 δύναμαι 493.  
 δύω, δύω 239.  
 δυογόν 612, 626, 636.  
 δύπτης 60.  
 δύπτω 60.  
 δύρομαι 725.  
 δυσ- 239.  
 δυσαριστοτόκεια 276.  
 δυσβράκανον 463.



- δυσετηρία 208.  
 δυσηλεγής 729.  
 δυσί(ν) 239.  
 δύσκολος 471.  
 δυσμενής 239.  
 δυσοίξειν 656.  
 δύστηνος 212.  
 δυσχείμερος 201.  
 δυσχερής 199.  
 δύσχιμος 201.  
 δυσώδης 244.  
 δυνάδεκα 239.  
 δῶ 234.  
 δώδεκα 239.  
 δαδευχέτης 688.  
 Δαδώνη 484.  
 Δάιλος 621.  
 δῶμα 234, 330.  
 δαμός 621.  
 δωρεά, δωριά 609, 610.  
 Δωρίς 239, 642.  
 δωριστί 648.  
 δωροδόκος 507.  
 δῶρον (donum) 73, 237.  
 δῶρον (παλαιστή) 235.  
 δωροφάγοι 297.  
 δῶς 237, 644.  
 δωτήρ 237.  
 δωτήν 208.  
 δῶτις 73, 208, 237.  
 ε = j 253; interchanged with ι; ε from ει 609 f., 607 ff.; becoming ι 247, 261, 365, becoming ο 365.  
 ε = εξ 383.  
 ε 246, 393, 443.  
 εαγμα 579, 582.  
 εαδα 229.  
 εαδον 229.  
 εάλην 550.  
 εάν 436, 610.  
 εανός 376.  
 εανός 376.  
 εαρ (ver) 42, 388.  
 εαρ (blood) 398.  
 εαρινός 388.  
 Έάσαν 608.  
 εάφθη 511.  
 εβδμήκοντα 536.  
 εβδόματος 536, 716.  
 εβδομήκοντα 311.  
 εβδομος 72, 265, 536, 716.  
 εγγραβός 539.  
 εγγύθι, εγγύς 191, 527.  
 εγείρω 180, 725.  
 εγερί 180, 648.  
 εγφηληθῶντι 550.  
 εγκαπή 285.  
 εγάπω 142, 511.  
 εγκειμαι 543.  
 εγ κιβωτίω 543.  
 εγκντί 169.  
 εγοον 477.  
 εγραμμένω 180.  
 εγρετο 180, 674.  
 εγρήγορα 46, 180.  
 εγρηγόρησι 63.  
 εγρήσσω 674.  
 εγχεφε 569.  
 εγχελος 193, 194.  
 εγχεσίματος 330.  
 εγχος 504, 679.  
 εγώ(ν) 93, 307, 525, 526, 614, 689.  
 εδανός 229.  
 εδαρ (?) 741.  
 εδαφος 241, 685.  
 εδδειςεν 663.  
 εδεθλον 685.  
 εδεσμα 240.  
 εδηδοφα 505, 601.  
 εδηδοκα 505, 601.  
 εδητός 73, 240.  
 εδνα 579.  
 εδοντες 244, 725.  
 εδος 92, 240, 283, 652, 685, 711.  
 εδρα 240, 711.  
 εδραθον 233.  
 εδραμον 238.  
 εδω 46, 240.  
 εδωδή 73, 240, 379, 576.  
 εέδμεναι 580.  
 εέδνα, εέδνα 229, 565, 579, 582.  
 εειδόμενος 579.  
 εείκοσι 135, 430, 565, 579.  
 εειξε 135.  
 εειπον 459.  
 εειρόμενος 579.  
 εεις, εεις 392, 581.  
 εεισάμενος 579.  
 εέλδομαι 580, 592.  
 εέλδωρ 549, 580.  
 εελμαι 550.  
 εέλπετο 264.  
 εέλσαι 580.  
 εέργαθον 63.  
 εέργω 181, 580.  
 εερμένος 353, 354.  
 εέρση 345, 430, 578, 580, 582.  
 εέσαστο 376.  
 εέσχατος 580.  
 εεχμένη 193, 580.  
 εφεδεν 569.  
 εζελεν 474.  
 εζεσμαι 377.  
 εζομαι 240, 618, 652, 690.  
 εήνδανε 229.  
 εθελήμων 623.  
 εθελοντί 351.  
 εθελω 257, 726.  
 εθίω 63, 251.  
 εθνος 172, 346.  
 εθος 63, 251, 686.  
 ει 394.  
 εια 625.  
 ειαί 625.  
 ειαμενή 378.  
 ειάν 610.  
 ειανός 376.  
 ειαρ 398.  
 ειαρινός 388.  
 ειαροπότης 398.  
 ειαροπῶτης 398.  
 ειατο 577.  
 ειβω 305.  
 ειδαρ 240, 741.  
 ειδομαι 241, 647.  
 ειδον 105, 241.  
 ειδον 688.  
 ειδος 241, 647.  
 ειδωλον 241, 647.  
 εικλον 679.  
 εικοσι 135.  
 εικοσινημιτα 340.  
 εικω 107, 135, 663.  
 εικω 137, 138.  
 εικών 663.  
 ειλαπίνη 7, 264.  
 ειλαρ 550.  
 ειλατίνη 577.  
 ειλεός 358.  
 ειλέω 329, 550.  
 ειλη 550, 740.  
 ειλη 552, 685.  
 ειληφα 531, 532.  
 ειλλω 550, 688, 711.  
 ειλον 431, 557.  
 ειλυμα 358.  
 ειλυω 358, 359, 565.  
 ειλω 115, 358, 550.  
 ειμα 376, 686, 712.  
 ειμαι 376.  
 ειμαρται 110, 331, 689.  
 ειμί 59, 105, 375, 433, 711.  
 ειμι 23, 401, 581, 607.  
 ειν 481.  
 εινάκεις 310.  
 εινάτερες 308, 611.  
 είνατος 310.  
 εινί 274, 481, 681, 682.  
 είνοςίφυλλος 260.  
 είοι 625.  
 ειπον 105, 459, 467.  
 Ειραφιώτης 342.  
 ειργμός 181.  
 ειργνυμι 181.  
 ειργω, ειργω 181, 587.  
 ειρερος 353, 354, 685.  
 ειρημα 343.  
 ειρην 594.  
 ειρήνη 343.  
 ειρκτή 181.  
 ειρμός 353.  
 ειρος 344.  
 ειρύμεναι 345.  
 ειρυσθαι 345.  
 ειρω (say) 343.  
 ειρω (fasten) 353, 685.  
 εις 309, 713.  
 εις 392, 713.  
 εισα 240, 378.  
 εισβάλλω 475.  
 ειση 378, 580.  
 εισκευω 29.  
 εισομαι, εισατο 581.  
 εισπίπτω 211.  
 εισπράσσω 674.  
 εισω 309.  
 ειωθα 63, 251.  
 ειος (?) 397, 577.  
 εκ 33, 37, 309, 383.  
 Έκαβη 465, 586.  
 εκάθευδον 381.  
 εκαστος, εκάτερος 466, 561, 683.  
 εκατόν 53, 84, 135, 392, 741.  
 εκεί 475.  
 εκέκαστο 138.  
 εκεκήδει 503.  
 εκέκλιτο 150.  
 εκφέλετο 557.  
 εκηλος 136, 582, 662.  
 εκητι 136.  
 εκιζα 149.  
 εκιον 149.  
 εκλογή 363.  
 εκομεν 152.  
 εκπέλει 462.  
 εκπίνω 384.  
 εκστραπεύω 722.  
 εκτάδιος 648.  
 εκτείνω 384.  
 εκτος 384.  
 Έκτωρ 193.

- ἐκυρά, ἐκυρός 28,  
 136, 431.  
 ἐκφλαίνω 300.  
 ἐκφλυνδάνω 301,  
 657.  
 (ἐκω 417.)  
 ἐκών 136, 686.  
 ἐλάα 359.  
 ἐλαθον 401.  
 ἐλαθρός 482, 495.  
 ἐλαία 359, 566.  
 ἐλαιον 359.  
 ἐλακον 180, 458.  
 (ἐλάμνω 592.)  
 ἐλάνη 553, 685.  
 ἐλάσων 192, 669,  
 672, 681.  
 Ἐλαύα 566.  
 ἐλαύνω 360, 555,  
 606, 652, 682.  
 ἐλαφηβόλος 290.  
 ἐλαφος 132, 360.  
 ἐλαφρός 482, 495,  
 724.  
 ἐλάχεια 192.  
 ἐλαχυπτέρυξ 192.  
 ἐλαχύς 192, 291,  
 482, 495, 582,  
 721, 724.  
 ἐλάω 551.  
 ἐλδομαι 549, 592.  
 Ἐλέα 360, 564.  
 ἐλεγείον 359.  
 ἐλεγχεῖς, ἐλεγχος,  
 ἐλέγχω 192.  
 Ἐλένη 552.  
 ἐλευθέριος 651.  
 ἐλεύθερος 368, 496,  
 497.  
 ἐληλέδατ' 652 (bis).  
 ἐλήλυθα 63.  
 ἐλίκη 136.  
 ἐλίνη 595.  
 ἐλινος 359.  
 ἐλιξ 136, 359.  
 Ἐλιπεύς 451.  
 ἐλίσσω 136, 359.  
 ἐλεηθμός 136.  
 ἔλκος 137.  
 ἐλκύω 688.  
 ἔλκω 135, 136, 161.  
 ἐλλά 241.  
 ἐλλαβε 532.  
 Ἐλλάδιος 634.  
 ἐλλαθι 371.  
 ἐλλατε 371.  
 Ἐλλησποντος 270.  
 ἐλλοβα 539.  
 Ἐλλοί 548.  
 ἐλλός 360.  
 ἐλμυγέ 552, 553.  
 ἐλμιν 495, 552, 553.  
 ἔλμυς 495, 552, 553,  
 564.  
 Ἐλος, ἔλος 360.  
 Ἐλπήνωρ 264.  
 ἐλπίζω 264, 628,  
 629.  
 Ἐλπινίκη 640.  
 ἐλπίς 264, 592, 629,  
 640, 642.  
 ἐλπίς 687.  
 ἐλπομαι, ἔλπω 166,  
 264.  
 ἐλπωρή 264.  
 ἐλντρον 358, 359.  
 ἐλύω 358, 711.  
 ἔμαθον 311.  
 ἔμαπον 463.  
 ἐμβολή 475.  
 ἐμβραται 331.  
 ἐμέ 724.  
 ἔμειν 610.  
 ἐμεσις 324.  
 ἐμετος 324, 325.  
 ἐμέω 324.  
 ἐμήμεκα 601.  
 ἐμ μέσῳ 543.  
 ἐμμι 375, 433, 665.  
 ἐμμορα 331.  
 ἐμορτεν 332.  
 ἐμός 327, 635.  
 ἐμπαῖος 268.  
 ἐμπεδον 245.  
 ἐμπεσεῖν 210.  
 ἐμπίς 264.  
 ἐμπλαστον 278.  
 ἐμπλήσσω 461.  
 ἐμπορος 272, 543.  
 ἐμ προμάχοις 543.  
 ἐμφαλκός 169.  
 ἐν 309, 713, 726.  
 ἐν 302, 544.  
 ἐναγής, ἐναγίζω 170 f.,  
 ἐνάκεις, ἐνακούσιοι 310.  
 ἐναντίος 205.  
 ἐναρ 310.  
 ἐνάσθην, ἐνασσα 315.  
 ἐνατος 310.  
 ἐναυσις 398.  
 ἐναυσμα 398.  
 ἐναύω 398.  
 ἐνδελέχεια, ἐνδελε-  
 χέω, ἐν δελεχής  
 191, 730.  
 ἐνδιος 236.  
 ἐνδον 309.  
 ἐνεγκεῖν 309, 721.  
 ἐνεείκω 308, 580.  
 ἐνεικέμεν 308.  
 ἐνεήκοντα 310, 311.  
 ἐνέμπων 461.  
 ἐνέπω 467.  
 ἐνερθε(ν) 309, 544.  
 ἐνέροι 309.  
 ἐνέριτερος 309, 544.  
 ἐνή 311, 687.  
 ἐνηβητήριον 588.  
 ἐνήης 386.  
 ἐνην (παλαιάν) 311.  
 ἐνην (τρίτην) 310.  
 ἐνήνοθε 251, 730.  
 ἐνήνοχα 308.  
 ἐνθα 309.  
 ἐνθαῦτα 415.  
 ἐνθεῖν 450.  
 ἐνθεν 309.  
 ἐνθεῦτεν 415.  
 ἐνθρεῖν 257.  
 ἐνί 309, 432, 481,  
 681.  
 ἐνι 309.  
 ἐνιαχῆ 310.  
 ἐνιαχοῦ 310, 521,  
 703.  
 Ἐνικεύς 461.  
 ἐνιοι, ἐνιοτε 310,  
 357.  
 ἐνίπαπον 461.  
 Ἐνιπεύς 461.  
 ἐνιπή, ἐνίπτω 461.  
 Ἐνισεύς 461.  
 ἐνισπεῖν 119, 467.  
 ἐνίσσω 461, 467,  
 671.  
 ἐνίψω 467.  
 ἐννάκις, ἐννακούσιοι,  
 ἐννατος 310.  
 ἐννέα 77, 310, 724,  
 728.  
 ἐννέα 688, 691.  
 ἐννεακαιδεχτής 688.  
 ἐννεον 319.  
 ἐννεπε 467.  
 ἐννέωρος 355.  
 ἐννη 311.  
 ἐννη (nebat) 316.  
 ἐνήκοντα 310.  
 ἐνηφιν 310.  
 ἐννοσίγαιος 260.  
 ἐννυμι 22, 59, 376,  
 665, 686.  
 ἐννυός 319.  
 ἐνοπή 459, 467.  
 ἐνος 311, 546, 600.  
 ἐνοσίχθων 260.  
 ἐνοχλεῖν 191.  
 ἐνς 309.  
 ἐνταῦθα 309, 415.  
 ἐντέλλω 221.  
 ἐντερον 228, 309.  
 ἐντεῦθεν 309, 415.  
 ἐντός 309.  
 ἐνυδρις, ἐνυδρος 248.  
 ἐνωπαδῖς 650.  
 ἐνωπῇ 464.  
 ἐνώπιον-ια, -ιον 464.  
 ἔξ 384.  
 ἐξ 37, 234, 293, 309,  
 383, 435, 580,  
 696.  
 ἐξαίφνης 502, 680.  
 ἐξάκεις 392.  
 ἐξαλαπάζω 363.  
 ἐξανατέλλω 221.  
 ἐξαπίνης 502.  
 ἐξατράπης 722.  
 ἐξείης 193.  
 ἐξεπλάγην 277.  
 ἐξεστι 462.  
 ἐξούλης (δικη) 550.  
 ἐξωβάδια 403, 586.  
 ἔοικα 663, 741.  
 ἐόλει, ἐόληται 550.  
 ἔολπα 264.  
 ἔονοιαν 571.  
 ἔοργα 181, 622.  
 ἐόργη, ἐοργῆσαι 580.  
 ἐορτάζω, ἐορτή 580,  
 587, 740.  
 ἔος 393.  
 ἐοσσότηρ 461.  
 ἐπαθον 63, 272.  
 ἐπαῖω 386.  
 ἐπακούω 264.  
 ἐπαλπος 264.  
 Ἐπαμεινώνδας 646.  
 ἐπάσαστο 270.  
 ἐπασσύτεροι 191.  
 ἐπαυτοφραδῆς 658.  
 ἐπεῖ 264, 394.  
 ἐπείγω 180, 181.  
 Ἐπειός 276, 462.  
 ἐπεμάσαστο 312.  
 ἐπέναρ 310.  
 ἐπενήνοθε 251.  
 ἐπεστέψαντο 214.  
 ἐπέτης 460.  
 ἐπετήσιος 385.  
 ἐπεφρον 299.  
 ἐπηγκενίδες 308.  
 ἐπηγετανός 385, 715.  
 ἐπηλυσ 529, 556.  
 ἐπηλύτης 530.  
 ἐπηνεγκίδες 308.  
 ἐπηρεάζω, ἐπήρεια  
 610.  
 ἐπητής 386.  
 ἐπητύς 386.  
 ἐπί 32, 35, 263, 264.  
 ἐπιάλλω 551.  
 ἐπίπαρος 690.  
 ἐπιβαίνω 588.  
 ἐπιβαρέω 475.  
 ἐπιβάτης 473.  
 ἐπίβδα 588.  
 ἐπίγονος 264.  
 ἐπίδαιτρον 588.



- Ἐπίδαυρος 233.  
 ἐπειμένος 376.  
 ἐπίεσθαι 376.  
 ἐπιζαρεύω 475, 491.  
 ἐπιθλασσίδιος 634.  
 ἐπίθεμα 264.  
 ἐπιλέγομαι 364.  
 ἐπιλίγδην 649.  
 ἐπιμαίομαι 312.  
 ἐπίορκος 517.  
 ἐπίουρος 346.  
 ἐπιόφωμαι 463.  
 ἐπιπλήσσω 461.  
 ἐπίπλοος 271.  
 ἐπιπολή 271.  
 ἐπισκεύειν 570.  
 ἐπισκύνιον 169.  
 ἐπισμυγερῶς 716.  
 ἐπισσαι 209.  
 ἐπισσειών 372.  
 ἐπίσσοφος 512.  
 ἐπισταδόν 649.  
 ἐπιστεφής 214.  
 ἐπιστροφάδην 650.  
 ἐπιτέλλω 221.  
 ἐπιτήδειος 218.  
 ἐπίτηδες, ἐπιτηδεύω 218.  
 ἐπιτροχάδην, ἐπιτροχος 650.  
 ἐπιφθύνω 286, 699.  
 ἐπιχθόνιοι 198.  
 ἐπίχρυσος 264.  
 ἐπλάγχθην 278.  
 ἐπλετο 279.  
 ἐπλήγην 277.  
 ἐπομαι 119, 480.  
 ἐπομασίαις 339.  
 ἐπορον 281.  
 ἐπος 433, 459, 467, 671.  
 ἐποψ 264, 700.  
 ἐπρασεν 274, 674.  
 ἐπρησεν 283.  
 ἐπτά 52, 72, 265, 691.  
 ἐπτάμην 709.  
 ἐπτόκασεν 498.  
 ἐπω 460.  
 ἐπάνω 463.  
 ἐρα 120, 341.  
 ἐραζε 341, 633.  
 ἐραμαι 120, 325, 573.  
 ἐρανος 340.  
 ἐρατεινός 120.  
 ἐράτοθεν 571.  
 ἐρατός 120, 325.  
 ἐράω 120.  
 ἐργάζομαι 181, 580, 647, 653.  
 ἐργον 181.  
 ἔρδω 181, 491, 580, 622.  
 ἔρεβεννός 480.  
 ἐρέβινθος 343, 522, 557, 585, 729.  
 ἔρεβος 173, 480, 724.  
 ἔρεείνω 343.  
 ἐρεθίζω 340.  
 ἐρέθω 340.  
 ἐρείδω 213, 724.  
 ἐρείκη 742.  
 ἐρείκω 724.  
 ἐρείομεν 343.  
 ἐρείπω 351, 724.  
 ἐρεμνός 480, 481.  
 ἐρενοβοσκός 728.  
 ἐρεούς 344.  
 ἐρέσθαι 343, 579.  
 ἐρεσία 342.  
 ἔρεσος 343.  
 ἔρεσσός 343.  
 ἐρέσσω 46 f., 342, 343, 554, 587.  
 ἐρέτης, ἐρετμός 342, 537, 729.  
 ἔρετρια 343.  
 ἐρεύγω 181, 724.  
 ἐρευθός 252.  
 ἐρεύθω 252.  
 ἐρευνάω 343.  
 ἐρίφω 480.  
 ἔρεχθής 641.  
 ἐρέχθω 724.  
 ἐρέω 343.  
 ἐρημία, ἐρημος, ἐρημώω 325, 480, 724.  
 ἐρηρέδατ' 652.  
 ἐρι- 71.  
 ἐρίζω 629.  
 ἐρήρης 339.  
 ἐριθος 340.  
 ἐρίνεος 344.  
 ἔρινος 344, 685, 712.  
 ἐριον 344.  
 ἐρις 340, 629, 637.  
 ἔρις 121.  
 ἐρισφάραγος 186.  
 ἐριφος 360.  
 ἔριχθόνιος 144.  
 ἔρμα (source) 346, 347.  
 ἔρμα (ear-ring) 353, 354.  
 ἔρμαιον 347.  
 ἔρμαξ 564.  
 ἔρμείας 347.  
 ἐρμηνεύς, ἐρμηνεύω 347.  
 ἔρμης 347.  
 ἔρνος 346, 347.  
 ἔρος 120 f., 325.  
 ἐροτις 587, 740.  
 ἐρπετών 265.  
 ἔρπης 265.  
 ἐρπίζω 265.  
 ἔρπω 265.  
 ἔρρα 665.  
 ἐρράδαται 229, 523, 652.  
 ἐρραφεύτης 342.  
 ἐρρήθην 343, 622.  
 ἐρρηνοβοσκός 728.  
 ἔρρω 345, 556.  
 ἔρση, ἔρση 191, 345, 431.  
 ἐρσήεις 345.  
 ἔρσην 342.  
 ἐρυγγάνω 181.  
 ἐρυγή, ἐρύγηλος 181.  
 ἐρυθρία 252.  
 ἐρυθρός 252, 325, 420, 447, 582, 724.  
 ἐρύκω 61.  
 ἐρυσίβη 252.  
 ἐρυσίπελας 271.  
 ἐρυστάζω 345.  
 ἐρύω (draw) 61, 345, 593, 730.  
 ἔρχομαι 63, 190, 341, 551, 556, 701.  
 ἐρώ 105.  
 ἐρωδιός 345.  
 ἐρωίω 353.  
 ἐρωή 353.  
 ἔρας 120 f., 325.  
 ἐρωτάω 343.  
 ἔρωτιδούς 647.  
 ἐς (into) 309.  
 ἐς (= ἐξ) 383, 435, 696.  
 ἔσαμεν 253.  
 ἐσδέλλω 474.  
 ἐσθής 376, 464, 686.  
 ἐσθίω 63, 67, 240.  
 ἐσθλός 375, 376.  
 ἐσθος 63, 376, 686.  
 ἐσθω 63, 67, 240, 260.  
 ἐσκενάδαται 652.  
 ἐσλός 376.  
 ἐσπέρα, ἔσπερος 377, 686.  
 ἐσπερινός, ἔσπεριος 377, 642.  
 ἔσπετε 467.  
 ἔσπον 460, 467.  
 ἔς 383.  
 ἐσσόω 644.  
 ἔσσαν 644.  
 ἔσταλκα 688.  
 ΕΣΤ/ΕΔΗΤΣ 483.  
 ἐστία 207, 399, 686, 713.  
 ἐστίασις 233.  
 (ἐσὺ 724.)  
 ἐσχατος 384.  
 ἐσχεθον 63.  
 ἔσχον 193.  
 ἔσω 309.  
 ἐτάζω 207, 610.  
 ἔται 394.  
 ἔταιρα 629.  
 ἐταιρίζομαι 629.  
 ἔταιρίς 629.  
 ἔταιρος 251, 326, 686.  
 ἔταρος 251, 326, 686.  
 ἐτάφην 419, 512, 513.  
 ἔταφον 219.  
 ἔτεφάνδρω 207.  
 ἐτίθην 415.  
 ἔτενα 467.  
 ἐτέος 207, 253, 349, 376, 517, 610, 685.  
 ἔτερεσεν 225.  
 ἐτης 251, 686.  
 ἐτησίαί, ἐτήσιος 208, 645.  
 ἐτήτυμος 207, 685.  
 ἔτι 71, 207, 208, 430.  
 ἐτοιμάζω 644.  
 ἐτοιμος 376.  
 ἔτορε 222, 223.  
 ἔτος 208.  
 ἔτος 688.  
 ἐτυμολογία 5.  
 ἐτυμος 5, 207, 376, 685.  
 εὐ, εὐ 36, 244, 376, 582.  
 εὐαδε 229, 315, 568, 582.  
 εὐαδές 658.  
 εὐαδής 658.  
 εὐάλωκεν 550, 566, 568.  
 Εὐβανδρος 586.  
 εὐδείελος, εὐδηλος 236.  
 εὐδία 236.  
 εὐέθωκεν 251, 566, 568.  
 εὐέργη 580.  
 εὐερος 344.  
 εὐεστός 375.  
 Εὐφάγωρος 570, 586.  
 εὐφρητάσату 343, 570.

- εὐηφενέων, Εὐηφένης 510.  
 εὐθήμεων 255.  
 εὐθηνέω 255.  
 εὐιάδες 582.  
 εὐκαμπές 54.  
 εὐκατέακτος 579.  
 εὐκέατος 145.  
 εὐκηλος 138, 582.  
 εὐκόλος 471.  
 εὐκτίμενος 157, 656.  
 εὐλάζω 564.  
 εὐλάκα 542.  
 εὐλή 584, 576.  
 εὐλληρα 588, 569, 582.  
 εὐμάρεια, εὐμαρής 328.  
 Εὐμηλος 329.  
 εὐνή 207.  
 εὐνις 702.  
 Εὐνοστος 315.  
 εὐζέινος πόντος 270.  
 εὐπατέρεια 617.  
 εὐπετής 210.  
 εὐπλοκαμῖς 638.  
 εὐράγη 568.  
 Εὐριπος 352.  
 εὐρίσκω 742.  
 Εὐρος 398, 400.  
 εὐρος 346.  
 Εὐρυκίας 152.  
 εὐρύνω 346.  
 εὐρύνοπα 480, 645.  
 εὐρύς 71, 239, 346.  
 εὐρύχορος 200.  
 Εὐρώτας 353.  
 εὐς 375, 376.  
 εὐσανα 398.  
 εὐσεβής 541.  
 εὐσελμος 372.  
 εὐσταθής 63.  
 εὐστραι 388, 689.  
 εὐσύνινους 390.  
 εὐσωπία 740.  
 εὐτε 611.  
 εὐτράπελος 468.  
 εὐτρώσσεσθαι 468.  
 εὐχερής 189, 328.  
 εὐχή, εὐχομαι, εὐχος 690, 702.  
 εὐχολή 702.  
 εὐω 398, 689.  
 εὖω 393, 388, 689, 702.  
 ἐφακείσθαι 679.  
 ἐφεδές 241.  
 ἐφέπω 460.  
 ἐφεις 604.  
 ἐφετικός 604.  
 ἐφετινδα 650.  
 ἐφηβος 588.  
 ἐφηλος, ἐφηλόω 360.  
 ἐφημέριος 385.  
 ἐφθιθον 556.  
 ἐφθός 709, 710.  
 ἐφιάλλω, ἐφιάλτης 517.  
 ἐφίσσθαι 402, 604, 605.  
 ἐφίορκος 517.  
 ἐφλαδον 300, 657.  
 ἐφλιδεν 301.  
 ἐφορος 716.  
 ἐφυν 105, 376.  
 Ἐφύρα 143, 716.  
 Ἐχέδημος 119.  
 Ἐχέλαος 119.  
 ἐχεπευκῆς 164.  
 Ἐχέστρατος 119.  
 ἐχέτλη 394.  
 ἐχθαίρω 729.  
 ἐχθές 201, 705, 721, 723.  
 ἐχθοδοπήσαι, ἐχθόδοπος 658.  
 ἐχιδνα 193, 653, 654.  
 ἐχιεύς 647.  
 ἐχῆνος 193.  
 ἐχις 193, 482, 483, 647, 653.  
 Ἐχίον 193.  
 ἐχομαι 193.  
 ἐχραισμον 492.  
 ἐχυρός 193.  
 ἐχω 106, 192, 193, 379.  
 ἔχω 687.  
 ἐφαλῆος 709.  
 (ἐψές 705.)  
 ἐψία, ἐψίαομαι 722.  
 ἐψυθεν 530.  
 ἔψω 64, 486, 687, 709, 710.  
 ἔωμεν, ἔωμεν 398.  
 ἰών 713.  
 ἑώς 400, 690, 691.  
 ἑως 397, 691.  
 ἑωσφόρος 400.  
 F access. 65; = orig. u 385; pronunciation 558 ff.; written for the F 396, 450; views about F 10, 23, 559 ff.; j, i = F (i) 449, 576 ff.; F from u 606, from a diphth. 570, 656; F turned into vowels 563 ff., into consonants 583 ff., other transformations 600 ff.; F becoming a simple breathing 443; F lost 138, 344, 348, 517; F becoming λλ, ρρ, νν, σσ 664 f.  
 Fάδεα 229.  
 Fαδεῖν 429.  
 Fάλευρον 359, 591.  
 Fαλήιοι 380, 564.  
 Fάλις 360.  
 Fάξιοι 574.  
 Fάξος 601.  
 Fάργον 181, 274, 454.  
 Fάρων 344.  
 Fασστός 396, 561.  
 Fάστν 206, 207.  
 Fαῦλαξ 137.  
 Fαῦξος 574.  
 Fε 393, 429, 443.  
 Fεφάδγκύτα 229, 561.  
 Fέθος 429.  
 Fεικόνα 741.  
 Fείπην 460.  
 Fέκαστος 466.  
 Fέκτος 384.  
 Fέλκω 161.  
 Fέλως 380, 564.  
 Fέλωρ, Fελώρια 557.  
 Fέξ 384, 561.  
 Fεφακαταίαι, Fεξήκοντα 384.  
 Fέπος 460.  
 Fέργον 181, 561.  
 Fέργω 351.  
 Fέριον 558, 591.  
 Fέρρω 345, 557.  
 Fερύω 345.  
 Fέσπερε 377, 600.  
 Fέτης 393.  
 Fέτια 208, 520.  
 Fέτος 208, 561, 688.  
 Fέχε 384.  
 Fήνωψ 116.  
 Fήπην 460.  
 Fήρα 549.  
 Fηράνθεμον 388.  
 Fιδιοξένω 396.  
 Fίδιος 383, 635.  
 Fιδίω 429.  
 Fίκατι 37, 135, 444, 561.  
 Fιλεύς 574.  
 Fίλη 574.  
 Fιον 388.  
 Fίς 476, 589.  
 Fιταλός 208.  
 Fιτία 575, 611.  
 Fίτυς 575.  
 Fίφικτος 389.  
 Fοικέειν 559.  
 Fοῖκος 163, 716.  
 Fοῖνος 390.  
 Fολοῖς 584.  
 Fότι 398, 450.  
 Fράτρα 343.  
 Fρήτωρ 443.  
 Fυκία 163.  
 Fύκος 716.  
 ζ 615, 620, 622 ff., 740; ζ = δι 615 ff., 669; ζ = δι 617 ff.; δι (ζ) = δ, 88 620 ff.; ζ = gj (δi) 486, 619 f., 669; ζ = j 625 ff.; ζ = (δi) γ 636, 661.  
 ζά 617, 618, 621.  
 ζαβάλλειν 617.  
 ζάβας 617.  
 Ζάγκλη, ζάγκλον 621.  
 ζάηλος 617.  
 ζάει 617.  
 ζαελεξάμαν 617.  
 (ζαάνυλος 741.)  
 ζάθεος 618.  
 Ζάκανθα, Ζάκανθος 618.  
 (ζαάκοπος 741.)  
 ζακόρεια 617.  
 ζάκοτος 618.  
 Ζάκυνθος 616, 617, 618, 716.  
 ζαλάω 377.  
 Ζάλευκος 618.  
 ζάλη, ζάλος, ζάλος 377.  
 ζαμενής 618.  
 ζάμος = δάμος 660.  
 Ζάν 620.  
 ζανεκῆς 618.  
 ζάπεδον 618.  
 ζαπληθής 618.  
 ζάπλυντος 618.  
 (ζαρκάδιον 741.)  
 Ζάς 616, 617.  
 ζατράπης 722.  
 ζατρεφής 618.  
 ζάχολος 618.  
 ζαχρήης 618.  
 ζάχρυσος 618.  
 ζάω 477, 491, 620, 627.  
 -ζε (adverbs of place) 632 f.  
 ζεά 625.  
 ζεά 577, 625.  
 ζείδωρος 520, 625.  
 ζείνυμεν 573.  
 ζείνουσαν 377.  
 Ζέλεια 616.



- ζέλαια (Phryg.) 203.  
 ζέλλω 474, 491, 548.  
 ζέμα, ζέννυμι 377.  
 ζέρεθρον 491, 668.  
 ζέσις 377.  
 ζέσμα 377.  
 ζέσσαν 377.  
 ζεστός 377.  
 ζεύγμα 182.  
 ζεύγνυμι 43, 50, 54, 62, 182, 626.  
 ζεύγος 50, 182.  
 ζευξίλεως 362.  
 Ζεύξιππος 621.  
 Ζεύξις 117.  
 ζεύξις 43.  
 Ζεύς 236, 616, 620.  
 ζεύσασθαι, ζεύω 486, 491, 620, 661, 706.  
 Ζέφυρος 706.  
 ζέω 377, 625, 626, 627.  
 ζήλος 377.  
 ζηλώω 195.  
 ζημία 378, 545, 621, 625, 626.  
 Ζής 616, 617, 620, 626.  
 ζητέω 625.  
 ζητόραν 626.  
 ζητρεῖον 625.  
 ζητρός 625.  
 ζιά 626.  
 ζιεται 626.  
 ζίζυρον 626.  
 Ζμύρνη 673, 693.  
 ζύασσον 573, 588.  
 ζυή 377.  
 Ζώννυσος 609, 617.  
 ζορκάς 663.  
 ζύρε 663.  
 ζούσθω 627.  
 ζοφοδορπίδας 646.  
 ζόφος 706.  
 ζυγόν 43, 182, 612, 626, 699.  
 ζυγός 182.  
 ζύγρα 618.  
 ζύμη 267, 626.  
 ζωγρέω 170.  
 ζωδιακός 642.  
 Ζώιλος 621.  
 ζώμα 627.  
 ζωμός 287, 626, 627.  
 ζώνη 621, 627.  
 ζωνίον 545.  
 ζώννυμι 62, 627.  
 ζώντι 621.  
 ζών 97.  
 ζωπυρέω, ζώπυρον 627.  
 ζωρότερον 377.  
 ζωστήρ 627.  
 ή 394, 396.  
 ή 289, 386.  
 ήβαιός 541.  
 ήβάσκω 588.  
 ήβάω 588.  
 ήβη 588, 589, 633.  
 "Ηβη 121.  
 ήβητήριον 588.  
 ήγεμών 171.  
 ήγέομαι 171, 688.  
 ήδιων 335.  
 ήδομαι 35, 106, 229, 686.  
 ήδονή, ήδος 229, 686.  
 ήδύλος, ήδυμος 229, 485.  
 ήδύς 229, 233, 376.  
 ήειρε 353, 354.  
 ήέλιος 399, 400, 552, 690.  
 ήερέθονται 63, 348.  
 ήέμιος 400, 401.  
 ήετός 251.  
 ήθέω 379.  
 ήθμός 379.  
 ήθος 63, 251, 686.  
 ήθω 379, 686.  
 ήτ 385.  
 ήτα 625.  
 ήίθεος 36, 580.  
 ήκα 679.  
 ήκω 138, 589, 623.  
 ήλακάτη, ήλεκάτη 341, 730.  
 ήλασκάω 557.  
 "Ηλέκτρα 137.  
 ήλεκτρον 137.  
 "Ηλεκτρών 137.  
 ήλέκτωρ 137.  
 ήλέως 557, 610.  
 ήλαια 550.  
 ήλίθιος 557, 730.  
 ήλιος 399, 400, 552, 690.  
 "Ηλις 360.  
 ήλιτον 492, 557, 730.  
 ήλός 557, 610.  
 ήλος 360.  
 ήλυθον 63, 551, 556, 730 (bis).  
 ήλφον 292.  
 ήμαι 377, 378, 433, 626, 689, 690.  
 ήμαρ 229, 548, 594.  
 ήμαρτον 492.  
 ήμβροτον 690.  
 ήμέδιμνον 520, 710.  
 ήμεις 689.  
 ήμελλον 330.  
 ήμενος 378.  
 ήμέρα 229, 594.  
 ήμερήσιος 634.  
 ήμερίδης 646.  
 ήμερος 378.  
 ήμί 399, 433.  
 ήμι- 325, 589.  
 ήμισσον 666.  
 ήμισυς 325, 666.  
 ήμος 594.  
 ήν 436, 610.  
 ήνεγκα, ήνεγκον 105, 308.  
 ήνεικα 678.  
 ήνεκής 308.  
 ήνεμείς 263.  
 ήνέχθην 308.  
 ήνία 545.  
 ήνιοχεύς 611.  
 ήνίοχος 545, 611.  
 ήνίπαπον 464.  
 ήνорή 308, 609.  
 ήνοιφ 116.  
 ήος 397, 577, 594.  
 ήπανία 271, 723.  
 ήπάομαι 510.  
 ήπαρ 27, 461.  
 ήπειρος 469.  
 ήπεροπεύς, ήπερο-  
 πευτής, ήπερο-  
 πεύω 263.  
 ήπητής 510.  
 ήπητρια 510, 689.  
 ήπιαλος 680.  
 ήπιος 510.  
 ήρ 388.  
 "Ηρα 120.  
 ήραρον 339, 401.  
 ήρέμα 325, 724.  
 ήρεμαίος, ήρεμείω, ή-  
 ρεμία, ήρεμίω 325.  
 ήρι 400, 401.  
 ήριγένεια 401.  
 ήρνον 181.  
 (ήρχα 495.)  
 ήρωις 589.  
 ής 683.  
 "Ησιόδος 248.  
 ήσται, ήστο 689.  
 ήσσαν 589, 607, 631, 644, 668, 669.  
 ήσυχος 378, 703.  
 ήτριον 60.  
 ήύς 376.  
 ήύσε 434.  
 ήύτε 611.  
 ήχανεν 399.  
 ήχήνες 191.  
 ήχθετο 193.  
 ήχι 521.  
 ήώς 400, 577, 690.  
 θ access. 62, 197; θ  
 from gh 493; from  
 τ 506, 508; from  
 δ 522 f., 536.  
 θάα 253.  
 θαίομαι 253.  
 θαφρος 253.  
 θαυρός 258.  
 θάλαθθα 667.  
 θαλαμηπόλος 470.  
 θάλασσα 667.  
 θαλλίς 496.  
 θάλλος 223.  
 θάλλω 494.  
 θαλπωρή 355.  
 θαλυκρόν, θαλύψαι  
 494.  
 θάμα 253.  
 θαμβέω, θάμβος 219,  
 504, 527.  
 θαμίζω 630.  
 θάνατος 6.  
 θανείν 705.  
 θάπαν 527.  
 θάπτω 512.  
 θαρρέω, θαρσέω 256.  
 θαρρία 224.  
 θάρσος 256, 431,  
 433, 677.  
 θαρσύνβιος 256.  
 θαρσύνω 256.  
 θαρούμαχος 256, 484.  
 θάσαν 507.  
 θατός 253.  
 θαύμα 219, 253, 254.  
 θαυμάζω 145.  
 θαυματός 145, 253.  
 θαυστίκριν 253.  
 θέα 253.  
 θέαγον 613.  
 θέαινα 653.  
 θεάομαι 33, 102,  
 253, 254.  
 θεαρός 253.  
 θέατρον 253.  
 θέειον 259.  
 Θέετος 663.  
 θέειον 613.  
 θεηκόλος 470.  
 θεηπολλέω 470.  
 θεϊνός 520.  
 θείνω 255, 299.  
 θεϊον 259.  
 θεϊός 255, 386, 516.  
 θείω 577.  
 θέλεμον, θέλυμα,  
 θέλυμον 257, 715.  
 θέλω 257, 726.  
 θέμα 254, 255, 321.

- θέμεθλον 254, 394.  
 502, 523.  
 θεμέλια 552.  
 θεμέλιον 254.  
 θεμίζω 536.  
 θέμις 254, 364, 536.  
 θεμισκρέων 520.  
 θέναρ 199, 255.  
 θεοπόλος 470.  
 θεός 78, 485, 513 ff.  
 θεόφιν 687.  
 θερίδω, θερίζω 636, 670.  
 Θερμά, Θερμαί 493.  
 θερμαίνω 493, 494.  
 θερμετε 493.  
 θερμη 493, 585, 644.  
 θερμομαι 492, 493, 614.  
 θερμός 493, 494.  
 θίρος 493, 494.  
 Θερσίτης 256.  
 θέρω 224, 493, 494.  
 θείσις 254.  
 θέσκελος 467, 515, 520.  
 θεσμός 254.  
 θεσπίσιος 468, 515.  
 θέσπις 468, 515, 520.  
 Θεσπρωτοί 516.  
 θεσσάμενοι 520.  
 Θέσσανδρος 520.  
 θέσσαντο, θέσσομαι, θεστός 520.  
 Θέστωρ 520.  
 θέσφατος 467, 515, 517, 520.  
 Θέτις 253, 639, 640.  
 Θεύγνις 514.  
 Θεύδοτος 514.  
 Θευόδοτος 514.  
 θευροί 253.  
 θεύς 514.  
 θέω 256, 517.  
 θεωρός 253.  
 Θήβαζε 632.  
 Θήβαι, Θήβη 633.  
 θήβος 219, 254.  
 θήγω 256.  
 θηέομαι 253.  
 θήκη 254, 255.  
 θηλαμινού 253.  
 θηλαμών 252, 253.  
 θηλή 252.  
 θήλυς 252, 253.  
 θηλύτεραι 226.  
 θηλώ 252.  
 θήγιον 252.  
 θήρ 256, 439.  
 θήρα, θηράω 256.  
 θηρίον 256.  
 θής 254.  
 θησαύατο 253.  
 θησάμενοι 520.  
 θήσατο, θήσθαι 252, 253.  
 θήσσα 254.  
 θίασος 717.  
 Θίβος 515.  
 θιγγάνω 55, 107, 182, 215.  
 θίγμα 182.  
 (θίλε 497.)  
 θίν 255.  
 θιός 515.  
 θίς 255.  
 Θίσβη 588.  
 θλάω 485.  
 θλίβω 485.  
 θνήσκω 705.  
 θοάς 256.  
 θοίνη 484, 698.  
 θοός, θοός 256.  
 θοράνας, θοράνδης 717.  
 θόρνυμαι 256.  
 θόρυβος 257, 584, 729.  
 Θουδιππος 658.  
 Θουκλῆς 658.  
 Θουκυδίδης 658.  
 Θούμαντις 658.  
 θούριος, θούρος 256.  
 θρᾶνος, θράσκω 257.  
 θράσος 111, 256, 433.  
 Θράσσα 660.  
 θράσσω 729.  
 θράσυλλος 233.  
 θρασύς 256, 433.  
 Θράυλλος 233, 433.  
 θραύω 223.  
 θρέατο 257.  
 θρέομαι 257, 585.  
 θρεσκή 257.  
 θρήνος, θρήνως 257.  
 θρήσασθαι 257.  
 θρησκεύω, θρησκηλή, θρησκός, θρήσκω 257.  
 Θρησσα 669.  
 θρίναξ 501.  
 Θριώξ 633.  
 θρόμβος 527.  
 θρόνα 223, 224, 501.  
 θρόνος 257, 484.  
 θρός 257, 585.  
 θρυγονάω 501.  
 θρύλλος 257.  
 θρύλος 257, 585, 729.  
 θρύπτω 223.  
 θρώναξ 257.  
 θρώσκω 256, 710.  
 θυάξω 258.  
 θυάς 258.  
 θυάω 258.  
 θυγάτηρ 78, 257, 308, 516.  
 θυγατρίδεις 636.  
 θύελλα 258.  
 θυήεις 258.  
 θυιάς 258, 259, 717.  
 θύλακος 496.  
 θυλῖς 496.  
 θύλλα 496.  
 θυλλίς 496.  
 θύμα 258.  
 θύμβρα 60, 527.  
 θυμέλη 174, 276, 595.  
 θύμον 60, 258.  
 θύμος 258.  
 θυμός 115, 258, 259, 305.  
 θύνος 258.  
 θύνω 258.  
 θύος 60, 258.  
 θυοσκόος 100, 152, 694.  
 θύρα 79, 258, 516.  
 θύραζε 633, 717.  
 θύρασι 258.  
 θύρβα 233, 258.  
 θυρεός 258.  
 θύρετρον 140, 258, 281, 502.  
 θυρίς 258, 641.  
 θυρωρός 346.  
 θύσανος 259.  
 θύσθλα 259.  
 θυσία 258.  
 θυστᾶς, θύστης 259.  
 θύω 60, 115, 205, 258, 259, 484, 485.  
 ι from orig. α 352, 711 ff.; for ε 315; for φ 576; relation to J 606 f.; interchanged with υ 716 ff.  
 Ι (ὑπό) 718, 726.  
 ἱα 392, 594.  
 ἱάνω 389.  
 Ἰακχος 460, 576.  
 ἱάλλω 548, 551.  
 ἱαμβίζω 538.  
 ἱαμβος 55, 538.  
 ἱαμενή 378.  
 Ἰανασσα 576.  
 Ἰάνειρα 576.  
 Ἰάνθη 574.  
 ἱάομαι 389, 740.  
 Ἰάονες 606.  
 ἱάπτω 55, 538.  
 ἱαρείδω 636.  
 ἱαρείον 576.  
 ἱαρός, Ἰάρων 401.  
 ἱαύω 387, 551, 637, 660.  
 ἱβάνη, ἱβανος 365.  
 ἱβδη 365, 588.  
 ἱβηνα 365.  
 Ἰβυκος 585.  
 ἱβυξ 585.  
 ἱγα 379, 455.  
 ἱγγια 713.  
 ἱγκαφότευε 717.  
 ἱγκρος 180.  
 ἱγνύα 179, 180.  
 ἱδᾶ 241.  
 ἱδᾶν 101, 686, 690.  
 ἱδιος 393, 635, 686, 712.  
 ἱδιος 688.  
 ἱδίω 242, 386, 548, 607, 686.  
 Ἰδομενεύς 641.  
 ἱδος 229, 242.  
 ἱδρις 191, 242, 540, 639.  
 ἱδρός 242, 686.  
 ἱδρύνω 240, 241, 711, 712.  
 ἱδρῶς 229, 242, 686.  
 ἱδύοι 242, 565.  
 ἱέναι 401.  
 ἱεράς 636.  
 ἱεράξ 382, 576.  
 ἱερής 616.  
 ἱερός 161, 401, 600, 689.  
 ἱζάνω 549.  
 ἱζομαι 240.  
 ἱζω 240, 241, 352, 652, 711.  
 ἱημι 33, 62, 401, 604 ff.  
 ἱθαίνομαι 250.  
 Ἰθακήσιος 634.  
 ἱθαρός 250.  
 ἱθη 250.  
 ἱθηα 402.  
 ἱθυμ 63.  
 ἱθύς 63, 402.  
 ἱκανός 137.  
 ἱκαντιν 135.  
 ἱκάνω 137.  
 Ἰκαρος 461.  
 ἱκελος 74, 642, 662.  
 ἱκέτης 137, 138.  
 ἱκετήσιος 137.  
 ἱκκος 457, 482, 712.  
 Ἰκκος 462, 690.



- ἱκαίνω 137.  
 ἱκαῖος, ἱκαλῆος 137.  
 ἱκαλῆος 461.  
 ἱκαμένος 461.  
 ἱκαῖν 365.  
 ἱκαῖς 137, 685.  
 ἱκαμένος 137.  
 ἱκα 679.  
 ἱκνέομαι 137.  
 ἱκρια 461.  
 ἱκταρ 115, 184, 461.  
 ἱκτήρ 137.  
 ἱκτῖνος 461, 723.  
 ἱκτῖς 721, 723.  
 ἱκτωρ 138.  
 ἱκω 137.  
 ἱλαδόν 650.  
 ἱλεὺς 574.  
 ἱλη 550, 740.  
 ἱλιάδης 574.  
 ἱλιγγος, ἱλιγγέ 358, 688.  
 ἱλισσός 687.  
 ἱλλάς 358.  
 ἱλλω 358, 359, 711.  
 ἱμάλιος 137.  
 ἱμάς 394.  
 ἱμάσθλη 394.  
 ἱμάσσω 394.  
 ἱμάτα 711.  
 ἱμάτιον 376, 711, 712.  
 ἱμβρος 402.  
 ἱμερα, ἱμέρα 402.  
 ἱμέρας 402.  
 ἱμερος 402, 594, 689.  
 ἱμίτραν 718.  
 ἱμμάραδος 402.  
 ἱμονιά 394.  
 ἱν 309, 713.  
 ἱναλισμένα 741.  
 ἱνδάλλομαι 54, 242.  
 ἱνες 389, 617.  
 ἱνίον 389.  
 ἱνις 395.  
 ἱννευ 241.  
 ἱξ 461.  
 ἱξός 699.  
 ἱξίων 137, 713.  
 ἱξός 699.  
 ἱξότας 645.  
 ἱοδνεφές 706.  
 ἱόλη 388.  
 ἱόμωρος 330, 402.  
 ἱον 388.  
 ἱονθος 624.  
 ἱορκες 663.  
 ἱός (poison) 389.  
 ἱός (arrow) 75, 402.  
 ἱοστέφανος 388.  
 ἱότης 402.  
 ἱούλος (sheaf) 576.  
 ἱούλος (worm) 576.  
 ἱουλῶ 576.  
 ἱοχέαιρα 204, 402, 475.  
 ἱπερ 718.  
 ἱπη 461.  
 ἱπη 462, 690.  
 ἱπνός 709.  
 ἱπος 461.  
 ἱπώ 461.  
 ἱππάξομαι 628.  
 ἱππημολγοί 462.  
 ἱππιος, ἱππιος 462, 690.  
 ἱπποβουκόλοι 391.  
 ἱπποκλέυθος 146.  
 ἱπποκώων 152.  
 ἱπποπόλος 470.  
 ἱππος 25, 457, 462, 467, 712, 718.  
 ἱππότα 462.  
 ἱππότης 628.  
 ἱππυς 462.  
 ἱπταμαι 466, 708.  
 ἱπτομαι 461.  
 ἱς 389, 617.  
 ἱσθι 315, 329, 393, 467, 711, 712.  
 ἱσθμός 402, 740.  
 ἱσκεν 467.  
 ἱσκω 29.  
 ἱσματος 402.  
 ἱσμεν 433 f.  
 ἱσμερα 402.  
 ἱσμήνη, ἱσμηνός 402.  
 ἱσοδαίτης 231.  
 ἱσοευρής 229.  
 ἱσόρροπος 221.  
 ἱσος 378, 430, 665.  
 ἱσος 688.  
 ἱσσα 378.  
 ἱσσάομαι 378.  
 ἱσσος 378, 665.  
 ἱσσος 378.  
 ἱστημι 211, 274, 401, 605, 690, 707.  
 ἱστία, ἱστίη 713.  
 ἱστορέω 242, 434, 686.  
 ἱστορία 434, 686.  
 ἱστός 211, 691.  
 ἱστωρ 241, 242, 566, 686 (bis), 690.  
 ἱσχανάω 193.  
 ἱσχνός 742.  
 ἱσχός 193, 353, 389.  
 ἱσχω 193, 467.  
 ἱταλός 208, 712.  
 ἱταμός 401.  
 ἱτέα 389, 593.  
 ἱτης 63, 401, 402.  
 ἱττω 702.  
 ἱτις 389.  
 ἱνγῆ 585.  
 ἱνγμός 585.  
 ἱύω 585.  
 ἱυρκες 663.  
 ἱφι, ἱφιος 389, 687.  
 ἱφίς 389.  
 ἱχάλη 708.  
 ἱχθός 676, 723, 741.  
 ἱχλα 708.  
 ἱχνος 135, 172, 346, 502, 663.  
 ἱχώρ 137, 685.  
 ἱψ 461.  
 ἱψ 392.  
 ἱωγῆ 576.  
 ἱωή 388, 576.  
 ἱωκή 502.  
 ἱώλκα 576.  
 ἱών 614, 713.  
 ἱών 689.  
 ἱωρός 576.  
 ἱωχμός 502.  
 (jatrós 624.)  
 (jōthos 624.)  
 κ accessory 61.  
 κά (κατά) 567.  
 καβαίνω 567.  
 κάββαλε 381.  
 κάδμος 138.  
 κάζελε 567.  
 καθαίρω 138, 682.  
 καθαρός 138, 440.  
 κάθαρσις 138.  
 καθήκειν 314.  
 καί 138.  
 καιάδας, καίατα, και-εταέσσα 145.  
 καίνυνθαι 138.  
 καίνω 157, 499, 698.  
 (καιρός 110.)  
 καίω 145, 172, 577, 595.  
 κάκη 138.  
 κακίαν 631.  
 κακκάβη 465.  
 κακκαβίς 246.  
 κακκάω 139.  
 κάκη 139.  
 κακός 138.  
 κακόφατις 639.  
 κακός, κακύνω 138.  
 καλάβροψ 566.  
 καλαμύνει 139.  
 καλάμη 139.  
 Κάλαμις 139.  
 Κάλαμοι 139.  
 κάλαμος 139.  
 καλαυροψ 351, 566, 569.  
 καλέχες 194.  
 καλέω 52, 139, 556.  
 καλήζω 630.  
 καλήω 630.  
 καλιά 140.  
 καλιάς 140.  
 καλίδιον 140.  
 καλινδέω 158, 715.  
 καλιός 140.  
 καλλά 140.  
 Καλλιμηλος 329.  
 Καλλιρόη 140.  
 Καλλίς 639.  
 καλλίων 140, 649.  
 καλλονή 140.  
 κάλλος 140, 431.  
 κάλλυντρον 140.  
 καλλύνω 140.  
 κάλον 148.  
 καλός 140, 431, 554, 649.  
 κάλη, καλπίς 148.  
 καλύβη 60, 539.  
 καλύπτω 60, 149, 529, 539, 557.  
 καλχαίνω 152.  
 Κάλχας 152.  
 κάλη 152.  
 καμάρα 140.  
 κάμβαλε 381.  
 κάμνος 141, 595.  
 κάμων 105, 114, 677.  
 καμώντες 114.  
 κάμπτω 141, 529.  
 κανάζω 141.  
 καναχή 141, 730.  
 καναχηδά 650.  
 καναχής 141.  
 κάνδαρος 522.  
 Κανδαύλης 159.  
 κάνναβις 141.  
 κάνναβος 465, 586.  
 κάνναι 586.  
 Καπανεὺς 142.  
 καπάνη 142.  
 κάπετος 167, 693.  
 κάπη 141.  
 καπηλεία, καπηλεύω, καπηλῆς, καπηλος 142.  
 κάπια 148.  
 καπίθη 141.  
 καπνός 115, 142, 458.  
 κάπος 142.  
 κάπρα 142.  
 καπράω 142.  
 καπρία 142.  
 καπρίζω 142.  
 κάπριος 142.  
 κάπρος 142.  
 κάπτω 141.  
 καπύω 142, 458, 511.

- κάπων 153.  
 κάρ 142, 527.  
 κάρ 112, 142, 496, 527.  
 κάραβος 586.  
 κάρανος, καρανών 143.  
 καρβατίνη 539.  
 καρδία 18, 143, 554, 618.  
 κάρζα 618.  
 κάρηνον 142, 143.  
 καρθμός 694.  
 κάρις 143.  
 κάρκαροι 144.  
 καρκινάς, καρκίνος 143, 144.  
 Καρνάσιον 147.  
 Καρνείος 147.  
 κάρνη 148.  
 κάρνος 147.  
 καρπάλιμος 60, 143, 525.  
 καρπάτινος 539.  
 κάρπιμος 144.  
 καρπός (fruit) 144.  
 καρπός (wrist) 524, 525.  
 καρπύς 144.  
 κάρραζον 729.  
 καρταλλον 144.  
 κάρταλος 144.  
 κάρτην 147.  
 κάρτος 155, 459.  
 καρύα 144.  
 καρύκιον 438.  
 κάρνον 144.  
 κάρφιον 729.  
 κάρφος 694, 729.  
 κάρφω 528.  
 κάρχαι 143, 507.  
 κάρχαρος 144.  
 κας 138, 381.  
 κασίγητος 145, 175.  
 κάσις 145.  
 κασκαλίζω 707.  
 κασπολέω 212.  
 κασσίτερος 665.  
 κάσσυμα 381.  
 κασσύω 381, 666.  
 Κασταλία 138.  
 κάσχιθε 381, 667.  
 κατά 33, 381, 582.  
 καταδάπτω 233.  
 καταδαρθάνω 233.  
 καταδουλιζμός 693.  
 καταείνυσαν 376.  
 καταγίγω 180.  
 κατακθύνιος 418.  
 κατακτάς 157.  
 καταλέγω 363.  
 καταλείπω 462.  
 καταλοφάδια 649.  
 καταμωλύνομαι 326.  
 καταπτήτην 61.  
 κατάρχομαι 190.  
 κατάσσω 674.  
 κατέδραθον 233.  
 κατέθιζαν 713.  
 κατεσκεύαζε 570.  
 κατεσώσαμεν 696.  
 κατηνεκής 309.  
 κατήνοκα 309.  
 κάτθε 381.  
 καττίτερος 665.  
 κάττυμα 381.  
 καττύς 381.  
 καττύω 381, 667.  
 κατύ 716.  
 κατωμάδιος 649, 651.  
 κατωμαδών 650.  
 καύαξ 567.  
 καυάξαις 381, 566.  
 (καύγω 612.)  
 καύηξ, καύης 567.  
 καυκαλίας 152.  
 καυλός 157, 158.  
 καῦμα 145.  
 καῦσος 488.  
 καυστηρός 145.  
 κάφα 694.  
 καφάξω 482.  
 καφώρη 187, 694.  
 καχλάζω 197.  
 κῆω 145.  
 κέάζω 62, 145.  
 κέαρ 143.  
 κέαρνον 145.  
 κεβάλη 148, 425, 511, 539.  
 κέβλη 148, 425, 511, 539.  
 κέγχρος 144.  
 κεδάννυμι 246, 693.  
 κεδνός 653.  
 κείμαι 145, 626.  
 κεινός 146, 432, 609, 631, 664, 665.  
 κείρω 147, 155, 429, 558, 678, 694.  
 κείω 62, 110, 146, 429, 694.  
 κεκαδεῖν 242, 401, 503.  
 κεκαφής 142, 511.  
 κέκφε 142, 511, 546.  
 κεκλεβός 539.  
 κέκληκα 139.  
 κεκλιάται 150.  
 κέκραξ 144.  
 Κέκρω 144.  
 κελαδέω 730.  
 κέλαδος 629, 730.  
 κελαινεφής 7, 146, 520.  
 κελαινός 146, 370.  
 κελείς 558.  
 κέλευθος 146, 307.  
 κελεύω 139, 146.  
 κέλης, κελητίζω 146.  
 κέλλω 146, 725.  
 κέλομαι 52, 139.  
 κελύφη, κέλυφος 178.  
 κεμπός 511.  
 κεμφός 511.  
 κενεός 146, 432, 518, 609, 631, 664, 665.  
 κενεών 146.  
 κέννος 147, 609, 632, 665.  
 κενός 146, 609, 632, 664, 665.  
 κεντρηνεκής 308.  
 κέντρον 742.  
 κεραίζω 148.  
 κέραμος 147.  
 κεράννυμι 147, 711.  
 κεραός 147, 567, 586.  
 κέρας 147.  
 κέρασος 147.  
 κεραυνός 694.  
 κεράω 711.  
 Κεράων 147.  
 κέρυστος 155.  
 κέρδος 155.  
 κέρκος 158.  
 Κέρκυρα 158.  
 κέρμα 147, 247.  
 κέρνος 143, 147.  
 κέρρω 678.  
 κέρτομος 148.  
 κερσκίον 146.  
 κευθμάν 259.  
 κεύθος 259.  
 κεύθω 259.  
 κεφαλαίος 148.  
 κεφαλαργία (vulgar) 558.  
 (κεφαλάριον 143.)  
 κεφαλή 148, 445, 511.  
 Κέφαλος 148.  
 κεχλαδώς 202.  
 κεχλιδώς 656.  
 κέχλοιθεν 656.  
 κεχωρίδαται 652, 660.  
 κήβος 539.  
 κήδομαι, κήδω 242.  
 κήδος 242.  
 κηκός 139.  
 κηλήνη 146.  
 κηλός 146.  
 κήλον 148.  
 κήξ 567.  
 κήπος 149, 539.  
 κήρ 143.  
 Κήρ 148.  
 κηραίνω 148.  
 κηρίον 149.  
 κηρός 149.  
 κηρύκειον 438.  
 κήρυξ 556.  
 κήτος 145, 146, 587.  
 κήυξ, κήυξ 567.  
 κηώδης 145.  
 κίβδηλος 153.  
 κίγκαλος 146.  
 κίγκλος 146.  
 κίδναμαι 429, 693.  
 κίεις 149.  
 Κιέριον 471.  
 κιθών 415.  
 κίκως 158.  
 κικύω 717.  
 κίλλουρος 146.  
 κίμβιξ 704.  
 κίμψαντες 694.  
 κιν- 544.  
 κινάθισμα 63.  
 κινάουρον 544.  
 κινέω 149.  
 κίννυμα 149.  
 κίννυμαι 149.  
 κινύσσεισθαι 149.  
 κίοι 149.  
 κίρκος 158, 555, 715.  
 κίρνημι 711.  
 κισσοδέτας 645.  
 κισσός 196.  
 κιχήλη 708.  
 κίχλα 708.  
 κίω 149.  
 κίων 149.  
 κλαγγή 620.  
 κλαγγηδών 650.  
 κλάγος 538.  
 κλαδάσαι 154.  
 κλάδος 149, 154.  
 κλάζω 620.  
 κλαίγω 614.  
 (κλαίγω 612.)  
 κλαίς 149, 639.  
 κλαίω 577.  
 κλαῖξ 150, 614.  
 κλαυκίων 538.  
 κλάω 148.  
 κλείθρον 150, 501.  
 κλεινός 151.  
 κλείς 149, 639.  
 κλειτός 151.  
 κλείω (shut) 149, 614.  
 κλείω (celebrate) 151.  
 Κλέοβις 515.  
 κλέομαι 151.  
 κλέος 151.  
 κλέπτω 149, 425.  
 κλέπτης 60, 69, 149, 184.



- κλέφτης 425.  
 κληίς 149, 429, 585,  
     639, 694.  
 κληῖω 149.  
 κληῖσις 139.  
 κλητεῦν 139.  
 κλητήρ 139.  
 κλητός 139.  
 κλήτωρ 139.  
 κλήω 614.  
 κλίμα 150.  
 κλίμαξ 150.  
 κλίνη 150.  
 κλίνω 150.  
 κλίνω 150, 738.  
 κλισία, κλίσιον 140,  
     150.  
 κλιτός 150, 366.  
 κλοιός 149.  
 κλόνιον 150.  
 κλόσις 150, 151,  
     172, 554.  
 κλονιστήρ 150, 151.  
 κλόσις 146.  
 κλοπέυς 149.  
 κλοπή 149.  
 κλόπις 646.  
 κλοτοπεύειν 263.  
 κλύδων 151, 656.  
 κλύζω 151, 656.  
 κλύθι 151.  
 Κλυμένη 151.  
 κλυμός 151.  
 Κλυταιμνήστρα 658.  
 κλυτός 151.  
 κλύω 151, 324, 554.  
 κλωβίον 585.  
 κλωβός 585.  
 κλώζω 151, 620.  
 Κλωθες 144.  
 κλώθω 144, 508.  
 Κλωθώ 144, 166.  
 κλώψ 149, 184.  
 κμέλεθρον 140.  
 κμοδάλλω 712.  
 Κνακίων 160.  
 κνάμις 639, 640.  
 κνάμπω 536.  
 κνάπτω 536.  
 κνάφαλον 536.  
 κναφεύς 536.  
 κνάω 63, 502.  
 κνέφαλον 535.  
 κνέφας 535, 704.  
 κνήθω 63.  
 κνήμη 152.  
 κνημῖς 152, 640.  
 κνημός 152.  
 κνίδη 712.  
 κνιπός 704.  
 κνίσσα 509.  
 κνίσσα 509.  
 κνιφός 704.  
 κνίψ 694.  
 κνυζάω 632.  
 κνυζηθμός 632.  
 κνώψ 535.  
 κοᾶ 100, 152.  
 κοᾶξ 573.  
 κοᾶσαι 100.  
 κόγχη 152, 504, 506.  
 κόγχην 708.  
 κόγχος 82, 152, 506.  
 κογχύλη, κογχύλιον  
     152.  
 Κόδρος 138.  
 κοέω 152, 429, 517.  
 κοθεῖ 152.  
 κόθεν 466.  
 κοῖδος 247.  
 κοῖζω 574.  
 κοιλία 157.  
 κοῖλος, κοίλος, κού-  
     λος 157, 158.  
 κοιμάω 145.  
 κοῖνος 544, 646.  
 Κόιντος 572, 574.  
 κοινών 646.  
 κόιοι 157.  
 κοῖος (= ποῖος) 466.  
 κοῖος (number) 489.  
 κοιόφορος 158.  
 κοίρανος 158.  
 κοίτη 145.  
 κόκκυ, κοκκύω 152.  
 κόκκυξ 152, 717.  
 κόλαβρος 370.  
 κολάπτω 166.  
 κόλαφος 166, 496.  
 καλεκάνος 152, 555,  
     730.  
 κολετράω 362.  
 κόλλα 153.  
 κολλᾶν 153.  
 κολοβός 585.  
 κολόβριον 370.  
 κολοκάνος 152, 153,  
     730.  
 κολοκύνθη 505.  
 κολοκύντη 153, 505.  
 κύλος 169, 558, 585,  
     694.  
 κολοσσός 152, 153,  
     730.  
 κολούω 169, 585,  
     694.  
 κολοφάν 153.  
 κολώνη 153.  
 κολωνός 153, 346.  
 κομβακεύομαι 539.  
 κόμω 112.  
 κομδή 647, 653, 660  
     (bis).  
 κομίζω 660.  
 κόμμα 153.  
 κόναβος 7, 141, 465,  
     730.  
 κονίς 243, 730.  
 κόνις 502.  
 κονίσσαλος 372, 430,  
     665.  
 κοννέω 152.  
 κοπάω 153.  
 κόπανον 153.  
 κοπέυς 153.  
 κοπή 153.  
 κοπίω 153.  
 κοπίς, κόπις 153.  
 κόπος 153.  
 κόπρος 142.  
 κόπτω 153, 429, 670,  
     694.  
 κοράμβη 528.  
 κόραξ 153, 555, 710.  
 κόρδαξ 154.  
 κορδύλη 154.  
 κορέω 156.  
 κόρφα 148.  
 κόρη (κόρφα) 148,  
     434.  
 κορθύω 527.  
 Κορινθιακός 642, 655.  
 Κορίνθιος 643, 655.  
 Κόρινθος 143, 153,  
     495, 523.  
 Κόρινθα 653.  
 κορμήται 453.  
 κορμός 147.  
 κόρνοψ 471.  
 κόρος (black) 555.  
 κόρος (broom) 156.  
 κόρρη 143, 434.  
 κόρση 142, 143.  
 κορυθός 496.  
 κόρυμβα 527.  
 κόρυμβος 55, 527,  
     528, 539.  
 κόρυς 496, 527.  
 κορυφή 55, 143, 153,  
     496, 527, 539.  
 κορυφός 143.  
 κορώνη (crow) 153,  
     710.  
 κορώνη (curvature)  
     158.  
 κορωνίς 158.  
 κορωνός 158.  
 κοσκίον 146.  
 κοσκυλμάτια 169,  
     707.  
 κόσμος 138, 433.  
 κόσος 466.  
 κόσσω 670.  
 κότε 466, 472.  
 κότερος 458, 466.  
 κότταβος 465.  
 κοτύλη 154.  
 κοτυληδών 154.  
 κοτυλίσκος 154.  
 κότυλος 154.  
 κοῦ 466, 472.  
 κοῦα 152.  
 κοῦαμα 546.  
 Κουάριος 471.  
 κουρά 147.  
 κουρεῖς 147.  
 κούρη 148, 583.  
 κουρίδιος 148, 634.  
 κούρος 148, 159.  
 κουτάλη 694.  
 κοῦφος 162, 511.  
 κοχλίας, κόχλος 152.  
 κοχὺ 717.  
 κοχάνη 154, 709,  
     710.  
 Κόως 157.  
 κραδαίνω 154, 155.  
 κραδάω 154.  
 κράδη 154, 155.  
 κραδίη 143.  
 κράζω 584, 619.  
 κραταίνω, κραίνω 154,  
     155.  
 κραπαλή 679.  
 κραπνός 60, 143,  
     525, 680.  
 κράμβη 528.  
 κράμβος 528.  
 κραναός 144, 586.  
 κρανέα 610.  
 κρανεία 147, 610.  
 κρανίον 143, 144.  
 κράννα 143.  
 Κραννών 143.  
 κράνον 147.  
 κράνος (helmet) 143,  
     144.  
 κράνος (cornel-tree)  
     147.  
 κράντωρ 154.  
 κράστις 536.  
 κραταίειος 144, 155.  
 κραταῖος 155.  
 κραταίπεδον 144.  
 κρατερός 155.  
 κρατέω 155.  
 Κράτιππος 462.  
 κράτος 155, 459.  
 Κρατύλος 155.  
 κρατύνω 155.  
 κρατύς 155.  
 κραυγάζω 534.  
 κραυγανῶμαι 534.  
 κραύγαστος 534.  
 κραυγή 534.  
 κρεάγρα 170.  
 κρέας 84, 155.  
 κρείας 155.

- κρείον 155.  
 κρείσσαν 680, 681.  
 κρείων 154, 155.  
 κρείων 155.  
 κρέκω 534.  
 κρέμαιμαι, κρεμάν-  
 νυμι 65, 155.  
 κρεμβαλιάζω, κρεμ-  
 βαλιαστύς 539.  
 κρέμβαλον 539.  
 κρέσσαν 669, 680.  
 κρέων 154.  
 κρήδεμνον 234.  
 κρήιον 155.  
 κρημνός 155, 625.  
 κρήνη 143.  
 κρηπίς 589.  
 Κρήσσα 654, 660,  
 669.  
 Κρησφύγετον 520.  
 κρή 156, 351.  
 κρηδόμενος 622.  
 κρίζω 534, 622.  
 κριθή 156, 713.  
 κρίκε 534.  
 κρίμα 156.  
 κρίμων 156.  
 κρίνω 156, 168, 429,  
 694, 712.  
 κρύς (aries) 147.  
 κρύς (cicer) 144.  
 κρίσις 156.  
 κριτήριον 156.  
 κριτής 156.  
 Κριτίας 645.  
 κροκάλη 144.  
 κρόκη 144.  
 Κρονίδης 644, 645,  
 646, 647.  
 Κρόνιος 646.  
 Κρόνιος 646.  
 Κρόνος 154, 155.  
 κρόταφος 496.  
 κροτάνη 144.  
 κρύβδα 649.  
 κρυερός 400.  
 κρυμός 156.  
 κρυόεις 156.  
 κρυόμαι 156.  
 κρύος 156.  
 κρυπτάδιος 634, 651.  
 κρύπτω 529, 557,  
 676, 705.  
 κρυσταίνω 156.  
 κρύσταλλος 156.  
 κρύφα, κρυφά 323,  
 529.  
 κρυφάδης 650.  
 κρυφανδόν 650.  
 κρώζω 153, 534.  
 Κρωπία, Κρωπίδα  
 144.  
 κρώπιον 144.  
 κτ = κς 698.  
 κτάμεναι 157, 711.  
 κτάομαι 157.  
 κτεδών 698.  
 κτείνω 157, 499,  
 664, 682, 698,  
 711.  
 κτείς 698.  
 κτέννω 569, 664.  
 κτέωμεν 157.  
 κτήμα 157.  
 κτήνος 157, 268.  
 κτήσις 157.  
 κτίδες 723.  
 κτίζω 157, 630, 656,  
 698.  
 κτίλος 157.  
 -κτιμενος 630.  
 κτίννυμι 157, 711.  
 κτίς 721, 723.  
 κτίσις 145, 157, 698.  
 κτίσμα 698.  
 κτοίνα 698.  
 κτοινάτας 698.  
 κτόνος 157.  
 κτύναι 698.  
 κτύπος 72, 499, 698.  
 κύαθος 157.  
 κύαμος 471, 472.  
 κύανεος 546.  
 κυανόπεζα 618.  
 κυανόπεπλος 546.  
 κυανόπρωρος 546.  
 κύανος 471, 546,  
 612.  
 κυανοχαίτης 546.  
 Κυανοφιών 471.  
 κυανώπις 546.  
 κύαρ 157.  
 κύββα 528.  
 κυβερνάω 342.  
 κύβη 539.  
 κυβιστάω 539.  
 Κύδνα 471.  
 κύδνος 706.  
 κυέω 157, 158, 565.  
 κύεσκω 157, 565.  
 κύκλος 141, 158,  
 555, 715.  
 κύκνος 141.  
 κύλα 157.  
 κυλινδέω 715.  
 κυλινδών 158.  
 κύλιξ 157, 281, 502.  
 κυλίχνη 281, 502.  
 κυλίω 158.  
 Κυλλήνη 157.  
 κυλλός 158, 555.  
 Κύλων 157.  
 κυμ- 544.  
 κύμα (fetus) 157.  
 κύμα (unda) 158.  
 κυματίας 645.  
 κύμβαλον 158, 528.  
 κύμβη 158, 342,  
 528.  
 κύμβος 158, 528.  
 Κύμη 145.  
 κυν- 544, 696.  
 κυνέω 149, 159.  
 Κυνόσουρα 654.  
 Κυνουρία 544.  
 Κύντος 572.  
 κύος 157.  
 κύπελλον 159.  
 κύπη 159.  
 Κυπρίδιος 634.  
 κύπρος 539.  
 κύπτω 529.  
 κύρβεις 528.  
 κυρέω 158.  
 Κυρήνη 158.  
 κύριος 158, 159.  
 κυρίττω 158.  
 κύρος 158.  
 κυρόος 158.  
 κυρτός 158, 556.  
 κύρω 158.  
 κύσθος 159.  
 κυσός 159.  
 κύτος (hollow) 157,  
 169, 587.  
 κύτος (skin) 169,  
 694.  
 κύφερον 539.  
 κυφή 539.  
 κυφός 529, 646.  
 κύφος 529.  
 κύφαν 646.  
 κυψέλη 276.  
 κύων 159, 565.  
 κύως 145.  
 κύων 152.  
 κυκύω 152, 567.  
 κωλή 632.  
 κωλήν 632.  
 κωλύφιον 527.  
 κώμη 145.  
 κονήιον 159.  
 κονής 159.  
 κώνος 159.  
 κώπη 141, 144, 369.  
 κώρα 583.  
 Κώς 157.  
 κώς (= πώς) 90, 458,  
 466, 472.  
 κώς (ειρκή) 157.  
 κοτίλλω 159.  
 κοτίλος 159.  
 κοφείω 482.  
 κοφός 153, 511, 520.  
 λῆα 363.  
 λᾶας 362, 553.  
 Λάβδα 655.  
 Λάβδακος 655.  
 λαβή 141.  
 λάβραξ 534.  
 λαγαρός 183, 738.  
 λαγάσσαι 183.  
 λαγγάζω 183.  
 λαγγεύει 183, 526.  
 λάγδην 361.  
 λαγιδένς 647.  
 λαγινός 590.  
 λαγνεύω 183.  
 λάγνος 183.  
 λαγόνες 183.  
 λαγρόν, λαγρός 194.  
 λαγχάνω 504.  
 λαγώς 183, 526.  
 λᾶε 657.  
 Λαφοκύφαν 152, 362.  
 λᾶζομαι 532, 670,  
 671.  
 λᾶζωμαι 532, 671.  
 λᾶζω 173.  
 λαί 361.  
 λαία 363.  
 λαίας 600.  
 λαίβα 361, 600.  
 λαίγξ 287, 535.  
 λαίδιος 361.  
 λαιδρός 361 (bis),  
 657.  
 λαικόζω 361.  
 Λάιος 655.  
 λαίος 361.  
 Λαίς 361.  
 λαίτα 600.  
 λάιτος 362.  
 λαίφα 600.  
 Λάκαινα 654.  
 λακάνη 165.  
 Λάκας 160.  
 Λακεδαίμων 160.  
 Λακεδάμα 160.  
 λακεῖν 554.  
 λακερός (poisy) 160.  
 λακερός (toyn) 160.  
 λακέρυζα 160.  
 Λακινιον 160.  
 λακίς 160.  
 Λάκκος 160.  
 Λάκμων 160.  
 Λάκος 160, 542,  
 555.  
 λακπάτητος 361.  
 λακτίζω 361.  
 Λάκτις 362.  
 λαλαγέω, λαλαγή  
 534.  
 Λάλαξ 534.  
 Λάλος 534.  
 Λάμαχος 361.



- λαμβάνω 55, 292, 532, 671.  
 λαμπάς 265.  
 λάμπη 265.  
 λαμπρός 265.  
 λαμπτήρ 265.  
 λάμπω 265.  
 λαμυρός 361.  
 λανθάνω 55, 420.  
 λάξ 350, 361, 362.  
 λάξις 319.  
 Λαοκόων 152.  
 λαός 362.  
 λαπάρη 266.  
 λαπάσσω 363.  
 λάπη 265.  
 Λάπιθος 637.  
 λάπτω 363, 511, 554.  
 λαρός 361.  
 λᾶσθαι, λάσθω 361.  
 λάσθη 361.  
 λάσκω 160.  
 λάσταυρος 361.  
 λάσση 361.  
 λάτρης 363.  
 λάτρον 363.  
 Λαυαγήτα 362, 567.  
 λαφός 600.  
 λάφυρον 292, 531.  
 λαφύσσω 363, 511.  
 λάχεια 192.  
 λαχμός 502.  
 λάχνη 344.  
 λαχνηίς 344.  
 λάχνος 344.  
 λάω (wish) 361.  
 λάω (enjoy) 362, 363.  
 λάων 363.  
 λάινα 366, 367.  
 λεβηρίς 539.  
 λεβινθίοι 343, 557.  
 λέγω 44, 47, 105, 160, 363, 364, 739.  
 λεία 362, 363, 367, 641.  
 λειαίνω 365.  
 λείβηθρα 366.  
 λείβηθρον 365, 366.  
 λείβηνος 365.  
 λείβω 365.  
 λείμμα 462.  
 λειμάν 366.  
 λείος 365.  
 λειότης 365.  
 λείπω 50, 52, 266, 462.  
 λειτουργία 362.  
 λειτουργός 177.  
 λείχω 194.  
 λείψανον 462.  
 λείων 366.  
 λεκάνη 165.  
 λεκίς 165.  
 λέκος 165.  
 λεκροί 365.  
 λέκτρο 194.  
 λεκτός 363.  
 λέκτρον 194.  
 λέλαθον 401.  
 λέλαδα 180, 458.  
 λέλαχον 401.  
 Πέλεγεσ 364.  
 λελειχμότες 491, 595.  
 λελήμαι 361.  
 λέγεται 194.  
 λέξις 11, 363.  
 λεοντιδεύς 647.  
 λέπας 637.  
 λεπίς 539.  
 λέπορις 265.  
 λέπος 539.  
 λεπταλέος 558.  
 λεπτός 223, 265.  
 λέπυρον 539.  
 λέπω 371, 539, 724.  
 λεσχη 364.  
 λευγαλέος 159, 183.  
 λευκαίνω 628.  
 λευκάς 644.  
 λευκή, λευκή 293.  
 Λεύκιππος 462, 690.  
 λευκόιον 388.  
 λευκολόφας 645.  
 λευκός 113, 180, 161, 644.  
 λευκοφανής 290.  
 λευρός 365.  
 λευσμός 553.  
 λεύσσω 13, 55, 102, 113, 180, 449.  
 λευστήρ 553.  
 λευστός 553.  
 (λευτερόνω 417.)  
 Λευτυχίδης 119, 362.  
 λεύω 119, 553, 568.  
 λέχος 11, 194.  
 λέχριος 365, 501, 711.  
 λέχρις 365.  
 λεχώ 194.  
 Λεωδανάξ 658.  
 Λέων 366, 367.  
 Λεωργός 361.  
 Λήγω 183, 738.  
 Λήθη 50, 545.  
 Λήθη, Λήθος 120.  
 Ληϊβόπειρα 520.  
 Ληϊζομαι 363.  
 Ληϊη 363.  
 Ληϊς 362, 641.  
 Ληϊτίς 363.  
 Λήϊτος 177, 362.  
 Λήμα 361.  
 Λημάω 552.  
 Λήμη 552, 553.  
 Λήμμα 531.  
 Λήνος 344.  
 Λήξις 319.  
 Λήσις 361.  
 Ληστρίς 639.  
 Λητώ 120.  
 Λίαν 361.  
 Λίαξ 365.  
 Λιβάδιον 365.  
 Λιβάς 365.  
 Λίβει 365.  
 Λίβος 365.  
 Λιβρός 365.  
 Λιγγούριον 579.  
 Λίγξ 365.  
 Λίγυρον 579.  
 Λιγυρός 365.  
 Λιγύς 365.  
 Λίζον 371.  
 Λιζώνες 371.  
 (Λιθαδόνησα 495.)  
 Λιθάζω 630.  
 Λίθαξ 564.  
 Λίθος 307.  
 Λικμός 451.  
 Λίκνον 431, 450, 451.  
 Λικριφίς 365, 501, 711, 712.  
 Λικροί 365, 711.  
 Λιλαίομαι 361.  
 Λιμήν 366.  
 Λίμνη 366.  
 Λιμπάνω 462.  
 Λιμφεύω 266.  
 Λιμφός 266.  
 Λίνεος 366.  
 Λίνον 366.  
 Λίξ 365.  
 Λίπ' 266.  
 Λίπα 265, 266.  
 Λιπαρός 266.  
 Λιπαρίς 233, 265.  
 Λιπαρός 74, 227, 233, 265.  
 Λίπος 265.  
 Λίπτω 367, 368.  
 Λίς (lion) 366, 367.  
 Λίς (smooth) 367, 429.  
 Λίσπος 367, 380, 503, 601.  
 Λισσήν 367.  
 Λίσσομαι 666.  
 Λίσσον 371, 534, 673.  
 Λισσόν 371.  
 Λισσός 367.  
 Λίσσωμεν 463.  
 Λίστρον 367.  
 Λίσφος 367, 503.  
 Λίτα 366.  
 Λιτί 366.  
 Λιτός 367.  
 Λίτρον 450.  
 Λιφερνέω 368, 718.  
 Λιχανός 194.  
 Λιχμάζω, Λιχμάω 194, 595.  
 Λίχνος 194.  
 Λίψ (moisture) 365.  
 Λίψ (desire) 367, 368.  
 Λίψ 365.  
 Λιψουρία 367.  
 Λοβός 539.  
 Λογάς 363, 644.  
 Λογιάζω 183.  
 Λογίζομαι 363, 364, 739.  
 Λογικός 642.  
 Λογισμός 433.  
 Λόγος 44, 47, 363.  
 Λόγχη 742.  
 Λόε u. s. w. 369.  
 Λόετρον 569.  
 Λοιβή 365.  
 Λοίγιος 183.  
 Λοιγός 159, 183.  
 Λοιδόρος 657.  
 Λοιπός 462, 520, 674.  
 Λοίσθιος 676, 686.  
 Λοίσθος 676, 686.  
 Λοξίας 739.  
 Λοξός 184, 365, 739.  
 Λοξώ 739.  
 Λοπός 539.  
 Λοῦσσαν 160.  
 Λουτήρ 368.  
 Λούτριον 368.  
 Λουτρόν 368, 369, 709.  
 Λούω 42, 368, 369, 569.  
 Λόφος 649.  
 Λοχεία 194.  
 Λόχη 194.  
 Λόχος 194.  
 Λύα 368.  
 Λυαίος 368.  
 Λυγγάνομαι 369.  
 Λυγγούριον 579.  
 Λυγίζω 183.  
 Λυγισμός 183.  
 Λυγκεύς 55, 369.  
 Λυγμός 369.  
 Λύγξ (lynx) 53, 55, 369.

- λέγῃ (hiccough) 369.  
 λόγος 183, 718.  
 λογίω 183.  
 λογρός 159, 183.  
 λῆζω 369.  
 λύθρον 368.  
 λυκάβαι 161.  
 Λυκαβηττός 161.  
 λύκαινα 653.  
 Λυκάοργος 181.  
 λύκος 78, 84, 161, 553, 714.  
 Λυκόφως 161.  
 Λύκος 160.  
 λῦμα 42, 368, 369.  
 λυμάνομαι 368, 369.  
 λυμεῖν 369.  
 λύμη 368, 369.  
 λύπη 266.  
 λυπέω 266.  
 λυπηρός 266.  
 λυπρόκριτος 708.  
 λυπρός 266.  
 λυσ-ίας, -ίας 609.  
 λύσις 368.  
 λύσσα 553, 665, 666.  
 λυσσαίνω 553.  
 λυσσάω 553, 666.  
 λύσσημα 666.  
 λυσσητήρ 553, 666.  
 λυσομανής 553.  
 λυσώδης 553.  
 λυτήρ 368.  
 λύτρον 368.  
 λύττα 553, 666.  
 λυττός 160.  
 Λύττος 160.  
 λύχνος 180, 161, 180, 281, 431, 502.  
 λύνω 15, 368, 554.  
 λῶ 361.  
 λωβάομαι, λωβείω, λώβη, λωβητήρ 369.  
 λωίων, λῶστος 361, 363.  
 μ from F 455, 589 ff.  
 μάγειρος 7, 325, 326, 620.  
 μαγεύς, μαγίς, μάγμα 325.  
 μαδαρός, μαδάω 326.  
 μάδδα 622, 670.  
 μαδίζω 326.  
 μαδός 326.  
 μάζα 325, 491, 620, 622, 670.  
 μαζός 326.  
 μάϊα 333.  
 Μαωδεός 647.  
 μαίμας 232, 348.  
 μαίνομαι 103, 311, 676.  
 μαίνομαι 312, 394, 607.  
 Μαίρα 567.  
 (μαίχι 681.)  
 μάσαρ 161.  
 μασαρία 326.  
 μασαίριος 6.  
 μακεδνός 161.  
 Μακεδόνες 161.  
 μακέλα, μάκελος 326.  
 μακρόκρανος 708.  
 μακρός 161.  
 μάκτρα 325.  
 μάκων 162.  
 μάλα 594.  
 μαλακός 328, 522, 538, 591, 730.  
 μαλερός 594.  
 μάλευρον 359, 591.  
 μαλθακός 328, 522.  
 μάλθη 326.  
 μαλκενός 326.  
 μαλκίω 326.  
 μαλκός 326, 730.  
 μάλλον 594.  
 μαλλοπάραντος 403.  
 μαλλός (white) 591.  
 μαλλός (tuft) 591, 592.  
 μαλλωτός 592.  
 μαλός 591.  
 μάμμη 333.  
 μανθάνω 63, 311.  
 μανία 311, 491, 679.  
 μανιακός 642.  
 μανός 328, 335.  
 μάντις 311, 312, 433.  
 μαραίνω 331, 332, 555.  
 μαρasmus 331.  
 μαρσώω 675.  
 μάρη 328.  
 μαρίλη 567.  
 μαρμαίρω 330, 332, 567, 724.  
 Μάρμακος, Μάρμαξ 463.  
 μαρμάρεις 567.  
 μάρμαρος 567, 724.  
 μαρμαρυγή 172, 535, 724.  
 μαρμαρύσσω 567, 675.  
 μάρναμαι 327, 337, 338, 596.  
 Μάρπησσα 463.  
 μάρπτis 463.  
 μάρπτω 463.  
 μάρπυρ 330, 715.  
 μαρτύριον 330.  
 μαρτύρομαι 330.  
 μάρτυρος 330.  
 μάρτυς 330, 693.  
 Μαρφίαι 463.  
 μάσθλη 394.  
 μάσσω 162, 325, 326, 674.  
 μαστήρ 312.  
 μαστίζω 394.  
 μαστίξ 312, 394, 535, 639.  
 μαστός 326.  
 μασχάλη 595.  
 μάταιος 742.  
 ματ-έω, ενω 551.  
 μάτηρ 333.  
 μαῦρος 567, 682.  
 μαυρός 567.  
 μάχαιρα 327.  
 μαχείομαι, μαχέομαι 327.  
 μάχη 327.  
 μαχημας 623.  
 μάχιμος 327, 642.  
 μάχομαι 327.  
 μαφίδιος 385.  
 μαφιδίως 634.  
 με 724.  
 μεγαίρω 328, 558.  
 μεγακήτης 145.  
 μεγαλύνω 328.  
 Μεγαρίς 641.  
 μέγαρον 328, 558.  
 μέγας 328, 526.  
 μέγεθος 328.  
 μεγιστάν 686.  
 μέγιστος 328, 686.  
 μέδιμος 62, 243, 330, 475, 655.  
 μέδοντες 62, 243, 655.  
 μέδω, μέδομαι 243.  
 μέζω 326, 662.  
 μέζων 620, 679, 680.  
 μεθέπω 460.  
 μέθη 259, 522.  
 μέθην 259, 522.  
 Μεθύδιον 469.  
 Μέθυμνα 430.  
 μεθύσκω 259.  
 μέθυσος 259.  
 μεθύω 259, 585.  
 μειδάω 328, 656.  
 μείδημα 328.  
 Μειδίας 329.  
 μειδιάω 328, 656, 693.  
 μείδω 328, 656.  
 Μείδωλος, Μείδω 329.  
 μείζων 328, 620, 679, 681.  
 μελέω 329.  
 μελίσ 329, 703.  
 μελίσσω 329.  
 μελιχίη 329.  
 μελιχίος 329.  
 μελιχός 329 (līs), 703.  
 Μειχίαι 739.  
 μεύω 334.  
 μευράκιον 594.  
 μείραξ 594.  
 μείρομαι 331, 541.  
 μείς 333.  
 μέϊων 334, 335.  
 μέλαθρον 141.  
 μελαίνω 370.  
 μέλαι 79, 146, 370, 678.  
 μέλδω, μέλδομαι 41, 243, 592, 693.  
 μέλε 329.  
 μελεδαίνω 331.  
 μελεδάνη 331.  
 μέλει 330, 331, 558, 592.  
 μέλεος 329.  
 μελετώω 304, 331.  
 μελέτη 330.  
 μέλι 330, 595.  
 μελίαι 330.  
 μελίτη 595.  
 μέλισσα 330, 666, 670.  
 Μελίττα 653.  
 μελίφρα 330.  
 μέλικον 329.  
 μέλλιχος 329.  
 μέλλος 329.  
 μέλλω 103, 330, 451, 558.  
 μέλομαι 330.  
 μέλος 329.  
 μέλπηθρον 329.  
 μέλπω 329.  
 μεμαλαγμένος 326.  
 μέμαμεν 311.  
 μέμαπον 463.  
 μέμνημαι 311.  
 Μεμνονίδης, Μεμνονίς 646.  
 μέμονα 103, 311.  
 μεμνόςτε 491.  
 μέμφομαι 742.  
 μενεαίνω 313, 628.  
 μενθήρες, μενθήρη 63, 812.  
 μενοινάω 313.



- μένος 15, 103, 311, 313.  
 Μέντης 311.  
 Μέντωρ 311, 312.  
 μένω 103, 311.  
 μερίζω 110, 331.  
 μέριμνα 103, 110, 330, 331, 558, 693.  
 μερίς 331.  
 μερμαίρω 330, 693.  
 μέμερος, Μέμερος 330.  
 μέμηρα 103, 110, 330.  
 μερμηρίζω 330.  
 μερμηρικοί 330.  
 μέρμις 593.  
 μέρος 65, 110, 282, 331, 332.  
 μέροψ 110, 116, 463.  
 μεσαιπόλιος 332.  
 μεσηγύ 209.  
 μεσημβρία 402, 719.  
 μέσμα 243.  
 μεσόγεια 177.  
 Μεσοποταμία 469.  
 μέσος 93, 332, 551, 590, 662.  
 Μεσσαπίαι, Μεσσάπιοι 119, 469.  
 μεσσάτιος, μέσσατος 332.  
 μεσσηγύ(ς) 332.  
 μέσσοι 332.  
 μέσσος 92, 332, 551, 666.  
 μεστός 243.  
 μέσφι 332.  
 μέσφι 332, 520.  
 μετά 209, 332, 595.  
 μεταδῆα 230.  
 μεταδρομάδην 650.  
 μεταφουκίει 396.  
 μέταξε 209, 633.  
 μεταλλάω 551.  
 μεταλλάξαντι 738.  
 μέταλλον 551.  
 μεταξύ 209, 332.  
 μέτασσαι 209.  
 μετεκίανον 63, 149.  
 μέτερος 729.  
 μετέρχομαι 551.  
 μετίωρος, μετήρος 348.  
 μετρίω 327.  
 μετριάω 614.  
 μέτριος 327, 328, 614.  
 μέτρον 65, 312, 327, 655.  
 μέτωπον 112.  
 μέχρις 595.  
 μή 317, 332.  
 μηδαμῶς 393.  
 μήδεα 326, 662.  
 μήδομαι 243.  
 μήδος 243.  
 μηκάομαι 592.  
 μήκος 161.  
 μήκων 162.  
 μήλον (sheep) 591, 592.  
 μηλονόμας 645.  
 μήλοψ 591.  
 μήν 200, 333.  
 μήνη 333, 400.  
 μηνιαῖος 333.  
 μήνις 103, 311, 639.  
 μήννος 333.  
 μηνύω 311, 312.  
 μήρινθος 593.  
 μηρός 595.  
 μηρύω 593.  
 μήστωρ 243.  
 μήτηρ 333.  
 μήτις 208, 312, 433, 589.  
 μήτρα 479.  
 μηχανάομαι 333.  
 μηχανή 333.  
 μήχαρ 333.  
 μήχος 333, 334.  
 μία 392, 594.  
 μίαςχος 222, 731.  
 μίγα 334, 534.  
 μιγάδες 334.  
 μιγάδες 650.  
 μιγάζομαι 628.  
 μιγάς 534, 628, 644.  
 μίγδα 649.  
 μίγδην 334, 649.  
 μίγνυμι 334, 534.  
 μικρός 429, 693.  
 μικύθινον 495.  
 Μίλητος 330.  
 Μίλλας 329.  
 Μίλτας 330.  
 Μιλτιάδης 330.  
 Μιλτώ 330.  
 Μίλων 330.  
 μιμέομαι 327.  
 μιμήσκω 311.  
 μῆμος 327, 512.  
 μίν 543, 595.  
 Μινύα 335.  
 μινύζης 334.  
 μινύθω 63, 334.  
 μίννθα 334, 495.  
 μιννθάδιος 334, 385, 495, 634.  
 μινυρίζομαι 335.  
 μινυρός 335.  
 μινύρω 335.  
 μινύω 334, 712, 717.  
 Μίνως 313.  
 μίξις 334.  
 μίσγω 334, 371, 431, 444, 534, 739.  
 μισέω 594.  
 μίσθαρος 340.  
 μισθός 89, 280.  
 μίσος 594.  
 μιστύλλω 717.  
 μίτος 593.  
 Μιτυλήνη 717.  
 μίτυλος 717.  
 μνάομαι 200, 311.  
 μνήμη 311.  
 μνημοσύνη 311.  
 μνήμων 311.  
 μόγισ 650.  
 μόθος 335, 506.  
 μόθων 336.  
 μοιμάω, μοιμύλλω 336.  
 μοίρα 110, 331.  
 μοιράδιος 634.  
 μοιρίδιος 393, 634.  
 Μοῖσα 312.  
 μοῖτος 324.  
 μοιχός 194.  
 μολβίς 585.  
 μόλιβδος 718.  
 μόλιβος 243, 370, 585, 718.  
 μόλις 650.  
 μολόβριον 370.  
 μολοβρίτης 370.  
 μολοβρός 370.  
 μολπίς 264, 592.  
 μολύβδαινα, μολυβδῖς 370.  
 μολύβδος 370, 654, 718.  
 μόλυβος 370, 585, 654, 718, 730.  
 μολυβούς 370.  
 μολυβρός 370.  
 μολύνω 370.  
 μόλυχνος 502.  
 μονάς 644.  
 μονθυλεύω 593.  
 μόνος 335.  
 μονωτί 648.  
 μόρα 331.  
 Μόριχος 718.  
 μορμολύκειον 535.  
 μορμολύττομαι 535.  
 μορμύρω 336, 714, 717.  
 μόρναμαι 327.  
 μόρος 110, 331, 332.  
 μόρσιμος 331.  
 μορτός 331.  
 Μόρυχος 718.  
 μορφή 463, 593.  
 μόσχος (shoot) 593.  
 μόσχος (calf) 593.  
 μουῖα 336.  
 μουκηνός 162.  
 Μουνιχία 718.  
 Μουνυχίος 633.  
 Μουνιχίων 718.  
 Μοῦνιχος 718.  
 μούνος 335.  
 Μοῦνυχος 718.  
 (μουρκίζει 533, 568.)  
 Μοῦσα 312.  
 μνάω 336.  
 μυδαίνω 336.  
 μυδαλός 336.  
 μυδάω 114, 336.  
 μύδος (dumb) 336.  
 μύδος (moisture) 114, 336, 595, 693, 718.  
 μύδρος 336, 595.  
 μύδων 336.  
 μύζω 739.  
 μύθος 336.  
 μύια 336, 612.  
 (μυίγα 612.)  
 μύινδα 336.  
 Μυκάλη 162, 319.  
 Μυκαλησσός 162.  
 μυκάομαι 349.  
 Μυκήνη 162.  
 μυκήρος 162.  
 μυκός 336.  
 μυκτήρ 162.  
 μύλη 114, 337, 714.  
 μυλῖται 337.  
 μύλλω 337.  
 μυλόδοντες 337.  
 μύλος 337, 714.  
 μυλωθρός 337.  
 μύνασθαι 324.  
 μύνδος 336.  
 μύνη 324.  
 μύξα 162.  
 μύξιμος 162.  
 μύσις 336.  
 μύριοι 338.  
 μυρμηδών 337.  
 μυρμηκία 609.  
 μύρμηξ 337, 338, 358, 382, 596, 700.  
 μύρμος 337, 358, 382.  
 μύρον 714.  
 Μυρσίλος, Μύρσιχος 692.  
 μύρ-ω, -ομαι 714.  
 μύς 338.  
 μυσαχνός 502.

- μύσος 336.  
 μυστήριον 336.  
 μύστης 336.  
 μύσχιον 338.  
 μύτης 336.  
 Μυτιλήνη 717.  
 μύτιλος 717.  
 μύτις 336.  
 μυττός 336.  
 μύω 336.  
 μῶν 338.  
 μῶλος 337.  
 μωλύεται 599.  
 μώλυγερ 599.  
 μωλυρός 326.  
 μώλυσ 326, 599.  
 μωλύτερον 599.  
 μωλύω 326.  
 μῶμαι 312.  
 μῶμος 715.  
 μωραίνω 338.  
 μωρία 338.  
 μωρός 338.  
 μῶρος 338.  
 μωρός 338.  
 Μῶσα 312.  
  
 ν Dor. for λ 450.  
 ν ἐφέλκυστικόν 54.  
 Νάφπακτιών 570.  
 ναί 317.  
 ναιετάω 304, 315.  
 ναίτης 315.  
 ναίω (dwell) 33, 315.  
 ναίω (flow) 319.  
 νᾶμα 319.  
 Νάξος 319.  
 ναός 315.  
 ναρός 319.  
 νάρω 179.  
 νᾶς 310.  
 νασμούς 319.  
 ναύει 319.  
 ναύκρατος 155.  
 ναῦλον 313.  
 ναῦος 315, 566.  
 Ναύπακτος 368, 570.  
 ναῦς 313.  
 ναῦσθλον 313, 502.  
 ναυσθλόω 502.  
 ναυσία 313.  
 ναυσιόω 313.  
 Ναυτεύς 647.  
 ναύτης 313, 647.  
 ναυτία 313.  
 ναυτιάω 313, 314.  
 ναυτίλλομαι 313.  
 ναυτίλος 313.  
 ναῦω 319.  
 νάφω 338.  
 νάω 319, 692.  
 νεάν 315, 611.  
 νεανίας 315, 611.  
 νεάξ 315, 647.  
 νεαρός 315, 588, 642.  
 νεάτος 315.  
 νεβρός 315, 587.  
 Νεγρόπολις 598.  
 Νέδη 243, 244.  
 Νέδων 243.  
 νεηγενής 290.  
 νεΐαιρα 229, 315.  
 νειαρδής 229.  
 νεΐατον 228.  
 νεῖκλον 451.  
 νεῖος 315.  
 νεῖρον 315.  
 νεῖφει 318.  
 νεῖω 577.  
 νεκητήρ (?) 451.  
 νεκρός 162.  
 νέκταρ, νεκτάριος 184.  
 νέκτια 162.  
 νέκτυς 162.  
 Νεμέα 313.  
 νεμέθοντο 63, 556.  
 νεμεσίζομαι 313, 314.  
 νέμεις 313, 314, 489.  
 νεμυσάω 313, 314.  
 νεμέτωρ, Νεμέτωρ 313, 314.  
 νέμησις 313.  
 νέμομαι 313, 314.  
 νέμος 313, 314.  
 νέμω 44, 51, 313, 314.  
 νενέφωται 294.  
 νίνοφε 294.  
 νεοαρδής 229.  
 νεοαύητος 229.  
 νέομαι 314, 711.  
 νεόπτραι 267.  
 νέος 310, 315.  
 νεός 315.  
 νεοσσός 315.  
 νεοστιά 216, 315, 609.  
 νεοττός 647.  
 νεοχμός 315.  
 νέποδες 266, 267, 537.  
 νέρτεροι 309, 544.  
 νέρθε(ν) 309, 544.  
 Νέστος 244.  
 Νέστος 243.  
 Νέστωρ 244, 315.  
 νεῦμα 318.  
 νευρά 316, 477, 568.  
 νεῦρον 176, 270, 316, 346, 477, 568, 586, 682, 692.  
 νεύσις (nod) 318.  
 νεύσις (swimming) 319.  
 νευστάζω 318.  
 νευστήρ 319.  
 νεύω (nod) 318.  
 νεύω (swim) 319.  
 νεφέλη 174, 276, 294.  
 νέφος 276, 294, 423, 704.  
 νεφίω 294.  
 νεφρίδιος, νεφρίτης 316.  
 νεφρός 316, 483.  
 νέω (spin) 67, 316.  
 νέω (heap up) 316.  
 νέω (swim) 318, 319, 692.  
 νεωστί 315.  
 νέωτα 208.  
 νη- 306, 317.  
 νη 317.  
 νήδυμος 725.  
 νηέω 316.  
 νηθω 63, 316.  
 Νηιάς 319.  
 νήϊστος 316.  
 Νηῖται 316.  
 νηκερδής 317.  
 νῆμα 316.  
 νηνεμία 317.  
 νηνέω 316.  
 νῆνις 639.  
 νηπίαχος 703.  
 νηπιος 471, 495, 703.  
 νηπύτιος 471, 495.  
 Νηρεύς 319, 641.  
 Νηρηΐς 641.  
 νήριτος 339, 340, 728.  
 νῆς 310.  
 νῆσις 316.  
 νῆσος 109, 319.  
 νῆσσα 317.  
 νῆστις 538.  
 νήτη 315.  
 νητρεκέως 468.  
 νῆτρον 316.  
 νήφω 338, 538.  
 νήχω 317, 319, 702, 710.  
 νίβα 318.  
 νίζω 317, 619, 670, 671.  
 νικάω 135.  
 νίκειν 451.  
 Νικεύς 461.  
 νίκη 107.  
 Νίκεππος 462.  
 νίκλον 451.  
 Νικόδιππος 658.  
 νίν 543.  
 νίπτρον 317.  
 νίπτω 317, 671.  
 νίσσομαι 314, 665, 711.  
 νίσσω 317.  
 νίτρον 450.  
 νίφα 318, 481, 482.  
 νιφάς 318, 481.  
 νίφει 318, 481, 482, 692.  
 νιφετός 318, 481.  
 (νός 608.)  
 νοέω 179.  
 νομάς 644.  
 νομέυς 313.  
 νομή 313.  
 νομίζω 313, 630.  
 νόμισμα 313.  
 νομός 313.  
 νόμος 45, 51, 313, 314.  
 νόος 179.  
 νόσος 162.  
 νόστιμα 315.  
 νόστος 314, 315, 337, 711.  
 νόσφι(ν) 320, 520, 687.  
 νοσφίδιος 634.  
 νοσφίζομαι 320.  
 νοτερός 319.  
 νοτίω, νοτίζω 319.  
 νοτία 319.  
 νότιος 319.  
 Νότος 319, 365.  
 νοῦσος 162.  
 νύ 318.  
 νύγμα, νυγμός 546.  
 νυκτηρινός, νυκτηρίς, νύκτερος 162.  
 νυκτιλαμπής 644.  
 νυκτίπλαγκτος 163, 644.  
 νύκτωρ 162.  
 Νύμφαι 121.  
 νύμφη 54, 121.  
 νυμφίδιος 634.  
 νύν, νυνί 318.  
 νύξ 162, 644, 714.  
 νύξις 546.  
 νύος 33, 319, 692.  
 νύσσα 322, 546.  
 νύσσω 322, 546.  
 νυστάζω 318.  
 νύσταλος 318.  
 Νυφόδωρος 54.  
 νύχιος 162, 710.



ω 184.  
ω 184.  
ω 184.  
44.  
O, 544.  
ες, νωλεμέας  
45, 313.  
μνος 320, 321,  
7, 715.  
ψ 116.  
εαίος 320.  
έζω 320.  
ιος 320.  
τον, νωτος 320.

from ak 522; ξ from  
j with σ 615.

αίαν 698.  
ανθός 522.  
ξείνος 260, 431.  
ξένιος 628.  
ξένφος 260, 431, 561.  
ξέννος 260, 310.  
ξένος 310, 431, 561,  
646.  
ξέω 698.  
ξίφη 699.  
ξίφος 699.  
ξουθός 162, 522.  
ξηλή 696.  
ξυλινός 642.  
ξύν 209, 392, 544,  
696, 714.  
ξυννένοφε 294.  
ξυνός 544.  
ξυρόν 699 (bis).  
ξυνά 699.

o from F 371, 570 ff.;  
from of 477.

δ- 323, 392, 685.  
δ 25, 394.  
δα (sheepskin) 390.  
δα (sorbus) 391.  
δά 563.  
\*Οα 586.  
\*Οάδμων 563.  
\*Οαξος 574, 601.  
δαρ 354.  
δαρίζω 343.  
δαριστής, δαριστής  
343.  
δαρος 343.  
δβδην 649.  
δβελός 483, 495,  
726.  
\*Οβριάρεως 723.  
δβρίκαλον 210, 370.  
δβριμος 55, 532,  
723.  
\*Οβριμώ 723.

VOL. II.

δβριον 370.  
δγδάτος 536.  
δγδδδον 163, 236.  
δγδοος 72, 163, 265,  
538, 537, 572.  
δγε 526.  
δγη 130.  
δγκινος 130.  
δγκος (bend) 130,  
190.  
δγκος (mass) 320.  
δγκος 170.  
δγχη 708.  
δδάξ 725.  
δδαξέω, δδαξησμός  
725.  
δδαξω 64, 725.  
δδελός 483, 495.  
δδένω 241.  
δδί 396.  
δδίτης 241.  
δδμή 244.  
δδοπόρος 658.  
δδός 229, 241, 685.  
δδός 241, 685.  
δδούς 240, 244, 725.  
δδύνη 240, 243.  
δδύρομαι 725.  
δδus- 244, 248, 594,  
723.  
\*Οδυσεύς 135, 244,  
667.  
δδυσάμενος 244.  
δδωδα 652.  
δδωδυσται 244.  
δζή 619.  
δζήλως 642.  
δζος 593.  
δζυξ 392.  
δζω 93, 244, 618,  
628, 652, 676.  
\*Οη 207, 586.  
δη 391.  
δθέων 260.  
δθη 260.  
δθμα 260.  
δθομαι 260.  
\*Οθρνάδας 496.  
δθρνύεις 496.  
\*Οθρνονεύς 496.  
δθρως, \*Οθρως 295,  
495, 496.  
οί 393.  
Οία 207.  
οία 390.  
Οιάνθεια, Οιάνθη 574.  
Οιαξίς 574.  
οιάτης 207.  
οίδα 101, 241, 434.  
οιδάω, οιδάινω, οί-  
δάνω, οιδέω 245.  
οιδμα 158, 245.

οίδος 245.  
οίεος 390.  
οιετίας 208.  
οίφος 320.  
οίζω 656.  
οίη (κώμη) 207, 586.  
οίη (sorbus) 391.  
Οίη 207, 586.  
οιητής 577, 586.  
οίκαδε 650.  
οίκαδης 650.  
οικ-έας, -ίας 609.  
οικέτης 163, 177,  
207, 393.  
οικέω 183, 656.  
οικία, οικίον 163.  
οικίζω 656.  
οίκοι 650.  
οικόνδε 233.  
οίκος 163, 393.  
οικτείρω, οικτέρω 711,  
729.  
οικτιρμός 711.  
οικτίρμων 711.  
οικτίβρω 711.  
\*Οικεύς 574.  
\*Οιλιάδης 574.  
οίμη 401.  
οίμος 401.  
οινάνθη 390.  
οίναρον 390.  
οινάς 390.  
οινάω 320.  
οινή 320.  
οίνη 390.  
οινίζω 320.  
οίνον 390.  
οινοποτάζω 630.  
οινός 320.  
οίνος 390, 564.  
οινόφυλξ 301, 597.  
οινώντα 320.  
οίος 320, 392.  
οίς, οίς 52, 92, 390,  
517, 589, 590.  
οίσος 390, 575.  
οιστός 402.  
οισύα 390, 575.  
οίσω 105.  
Οίτη 391.  
οίτος 401.  
Οίτυλος 575.  
(δίχι 681.)  
οίχομαι 507.  
οίω 656.  
οιωνός 391, 577.  
οίωντα 320.  
οίκα 487.  
οικέλλω 146, 725.  
οικον 464.  
οικνέω 708.  
οικνηρός 708.

οικνος 708.  
οικρις 131.  
οικρύεις 156, 723.  
οικταλλος 484, 698.  
οικτώ 72, 92, 163,  
684.  
οικτώ 688, 691.  
οίλβιος 372.  
οίλβος 372, 533, 585.  
οίλεθρος 576.  
οίλέκρανον 374.  
οίλέκω 61.  
οίλιβρός 367, 718,  
723.  
οίλιγάκις 370.  
οίλιγηπελέων 238.  
οίλιγοδρανέων 238.  
οίλιγος 370, 431, 534,  
614, 673, 724.  
οίλιγοστός 370.  
οίλιζων 370, 631, 673.  
οίλιος 614.  
οίλισθάνω 367, 723.  
οίλισθέω 721.  
\*Οίλισσην 367, 575.  
οίλκας 644.  
οίλκη, οίλκος 136, 137,  
161.  
οίλκυμι 61, 576.  
οίλμος 358, 359, 688.  
οίλοείται 371.  
οίλοιτροχος 358.  
οίλολυγαία 371.  
οίλολυγή, οίλολυγμός,  
οίλολυγών, οίλο-  
λύζω, οίολυς 371.  
οίλος 576, 579.  
οίλοίτροχος 358,  
359, 575, 658.  
οίλος 371, 585 (bis).  
οίλος 575.  
\*Οίλοσσών 575.  
οίλοσφραν 371, 575.  
οίλόπτω 371, 724.  
\*Οίλος 348.  
οίλος 372, 551, 685.  
\*Οίλοσσόνες 575.  
οίλοφυδνός 653.  
οίλοφύζω 653.  
οίλοφύρω 653.  
οίλπα 592.  
οίλπίς 264.  
\*Οίλυμπίας 633.  
\*Οίλυμπίας 644.  
\*Οίλυμπος 54, 265,  
724.  
\*Οίλυπος 54.  
\*Οίλυτεύς 667.  
οίλω 623.  
οίμαδόν 650.  
οίμαδος 629.  
οίμαλός 322, 323.

F f

- \*Ομάριος 340.  
 ὁμαρτέω 340.  
 ὁμαρτή 340.  
 ὁμβρέω 338.  
 ὁμβριμος 533.  
 ὁμβριος 338.  
 ὁμβρος 338, 528, 532.  
 ὁμηρεύω 340.  
 ὁμηρος 340.  
 ὁμιλος 550.  
 ὁμιχίω 194, 724.  
 ὁμίχλη, ὁμίχλη 194, 725.  
 ὁμιχμα 194.  
 ὁμμα (glance) 463.  
 ὁμμα (φροντίς) 260.  
 ὁμνούρας 453.  
 ὁμο- 544.  
 ὁμόζυξ 182.  
 ὁμόθεν 322.  
 ὁμοίος, ὁμοίος 322, 323.  
 ὁμοργμα 184.  
 ὁμόργνυμι 184, 555, 721.  
 ὁμός, ὁμόσε, ὁμοῦ 322.  
 ὁμπνεύω 510.  
 ὁμπνη, Ὀμπνία 510.  
 ὁμφαλός 294, 536.  
 ὁμφαξ 294, 613.  
 ὁμφή 504.  
 ὁμφύω 510.  
 ὄναρ 326.  
 ὄνειαρ 240, 725.  
 ὄνειδος 725.  
 ὄνειρατα 179.  
 ὄνειρος 326.  
 ὄνησις 725.  
 ὄνθος 261.  
 ὄνθυλεύω 261, 593.  
 ὄννημι 464, 712, 725.  
 ὄνοκίνδιος 149.  
 ὄνομα 320, 321, 715, 721, 725.  
 ὄνομάζω 320, 630.  
 ὄνομαι 725.  
 ὄνομαίνω 320, 321, 677, 682.  
 ὄνομακλήδην 649.  
 ὄνομαστί 648.  
 ὄνος 402.  
 ὄνυμα 215, 320, 715.  
 ὄνυξ 321, 422, 506, 546, 714, 731.  
 ὄξύς 131.  
 ὄον 391, 569.  
 ὄπαδός 241, 630.  
 ὄπάω 630.  
 ὄπατρος 392.  
 ὄπας 463, 464.  
 ὄπεύς 464.  
 ὄπή 113, 463.  
 ὄπηδέω 630.  
 ὄπηδός 630.  
 ὄπιδνός 653.  
 ὄπίζομαι 653.  
 ὄπίπας 464, 712.  
 ὄπιπεύω 463, 464, 712.  
 ὄπιστεύω 464.  
 ὄπισθεν 355.  
 ὄπισθέναρ 255.  
 ὄπισω 355.  
 ὄπιθο- 702.  
 ὄπλον 460, 454.  
 ὄπλότερος 460.  
 ὄπώραι 453.  
 ὄπός 349, 464, 685.  
 ὄππα 403.  
 ὄπποτε 467.  
 ὄππως 467, 489.  
 ὄπταλός 709.  
 ὄπτάω 466, 709.  
 ὄπτήρ 463.  
 ὄπτός 466, 709.  
 ὄππα 463.  
 ὄπώρα 355.  
 Ὀπαρίς 355.  
 ὄπας (ὄπας) 683.  
 ὄπρα 346.  
 ὄρανος 348, 350.  
 ὄράω 100, 101, 105, 346, 587.  
 ὄρβος 586, 690.  
 ὄργαδες 185.  
 ὄργάζω 580.  
 ὄργανον 181, 642.  
 ὄργας 184.  
 ὄργάω 184.  
 ὄργή 184, 185, 186.  
 ὄργιον 181.  
 ὄργιό 185, 729.  
 ὄρεγμα 185.  
 ὄρέγνυμι 185.  
 ὄρέγω 185, 671, 711, 729.  
 ὄρεινός 348.  
 ὄρειος 348.  
 ὄρείτης 348.  
 ὄρεξίς 185.  
 ὄρέοντο 346.  
 Ὀρέστης 348.  
 ὄρεύς 348.  
 ὄρφος 586, 690.  
 ὄρθόδαρον 235.  
 ὄρθός 348.  
 ὄριγνάσμαι 185, 711.  
 ὄρινδα 575.  
 ὄρίνω 47, 346, 729.  
 ὄρκος 517.  
 ὄρμαθός 353.  
 ὄρμας 347.  
 ὄρμενος 47.  
 ὄρμή 347.  
 ὄρμητήριον 347.  
 ὄρμα 353.  
 ὄρμικας 338.  
 ὄρμος (necklace) 353, 685.  
 ὄρνεον 347.  
 ὄρνις 347, 495.  
 ὄρνυμι 46 f., 346, 729.  
 ὄροβος 343, 585, 729.  
 ὄρύγνια 185, 729.  
 ὄρδαμος 352, 530.  
 ὄροθύνω 346, 729.  
 Ὀρολος 348.  
 (ἐπὶ) ὄρονται 346.  
 ὄρος 348, 431, 690.  
 ὄρος 690.  
 ὄρός 349, 685.  
 ὄρον (Phryg.) 348.  
 ὄρούβω 586, 599.  
 ὄρούς 346.  
 ὄρηξ 265.  
 ὄρρα 665.  
 ὄρρος 349, 431, 703.  
 ὄρρός 349.  
 ὄρσο, ὄρσο 346.  
 ὄρσοθήρη 348.  
 ὄρσω 346.  
 ὄρτή 580.  
 ὄρτυξ 349, 534.  
 ὄρυγάνω 349.  
 ὄρυγή 529.  
 ὄρυγμάδες, ὄρυγμα- 349.  
 ὄρυγμός 349, 724.  
 ὄρυγξ 349.  
 ὄρύγω 349.  
 ὄρυζα 575.  
 ὄρυκτήρ 349.  
 ὄρυμαγδός 349, 356.  
 ὄρυξ 349.  
 ὄρύομαι 356, 724.  
 ὄρύσσω 349, 504, 529, 674.  
 ὄρυχή 529.  
 ὄρφατεύω 294.  
 ὄρφανία 294.  
 ὄρφανίζω 294.  
 ὄρφανιστής 294.  
 ὄρφανός 294, 642.  
 Ὀρφεύς 480.  
 ὄρφναίος 480.  
 ὄρφνη, ὄρφνινος, ὄρφνός 480.  
 ὄρφοβότης 295.  
 ὄρφός 295, 642.  
 Ὀρφάνδας 295.  
 ὄρχαμος 189, 190.  
 ὄρχας 663.  
 ὄρχατος 642.  
 ὄρχηθμός 63.  
 ὄρχηστής 292.  
 ὄρχις 663.  
 ὄρχος 642.  
 ὄρραι 346.  
 ὄρώρεται 729.  
 ὄρωρέχεται 431.  
 ὄς (own) 393.  
 ὄς (relat.) 25, 396, 397, 433, 603.  
 ὄσγε 397.  
 ὄσμή 244, 433.  
 ὄσος 551.  
 ὄσσα 460, 654, 668, 671.  
 Ὀσσα 464.  
 ὄσσε 55, 101, 464, 671.  
 ὄσσητήρ 461.  
 ὄσσομαι 55, 464.  
 ὄσσος 396, 551.  
 ὄστακος 209.  
 ὄστάριον 209.  
 ὄσταφίς 721.  
 ὄστείνος, ὄστινος 209, 520.  
 ὄστέον 41, 209, 504.  
 ὄστρακίνα 650.  
 ὄστρακον 209, 496.  
 ὄστρειον, ὄστρεον 209.  
 ὄσφραίνομαι 244.  
 ὄσφύς 699, 722.  
 ὄσχη 593.  
 ὄσχος 593.  
 ὄτε 487, 611.  
 ὄτλω, ὄτλημα, ὄτλος 723.  
 ὄτοβος 715.  
 ὄτραλέος 225, 723.  
 Ὀτρεύς 721.  
 ὄτρηρός 225, 723.  
 ὄτρυγητάς 723.  
 ὄτύνω 721, 723.  
 ὄττι 490.  
 ὄττι 697.  
 ὄττινας 490.  
 ὄττοβος 465.  
 ου for fo 550.  
 οὐ 393.  
 οὐα 391.  
 οὐά, οὐά 563.  
 οὐαί (φύλαι) 586.  
 οὐαί (ναε) 563.  
 Οὐάβραν 563.  
 οὐατα 403.  
 οὐδ- 323.  
 οὐδαμῶν 393.  
 οὐδας 229, 241, 685.  
 οὐδενόσωρος 347, 654.  
 οὐδός 241, 685.



- οὐδάρ 248, 688.  
 Ουέλια 563, 564.  
 Ουενούσια 563.  
 οὐθάρ 260.  
 (οὐθε 497.)  
 οὐλαί 358.  
 οὐλαμός 550.  
 οὐλε 371, 372, 533.  
 οὐλείοιεν 371.  
 οὐλή 372.  
 Ούλιος 371.  
 οὐλόθριξ 344.  
 οὐλος (curly) 344,  
 556, 591.  
 οὐλος (whole) 551,  
 682, 685.  
 οὐλος (sheaf) 576.  
 οὐλότης 344.  
 οὐλοχύνται 358.  
 Οὐλώ 576.  
 αὐνομα 320, 321.  
 οὖον 569.  
 οὐρά 349, 431.  
 οὐράνη 350.  
 οὐράνιος 350, 519,  
 646.  
 οὐρανίωτες 350, 646.  
 οὐρανός 348, 350,  
 583.  
 οὐραχος 349, 703.  
 οὐρειος 348.  
 οὐρέως 348.  
 οὐρέω 350.  
 οὐρήθρα 350.  
 οὐρημα 350.  
 οὐρίαχος 349, 703.  
 οὐριος 387.  
 οὐρον (room) 346.  
 οὐρον (urine) 350.  
 οὐρορ 586.  
 οὐρός 349.  
 οὐρος (sentinal) 101,  
 346, 587.  
 οὐρος (mountain)  
 348, 431.  
 οὐρος (boundary)  
 690.  
 οὐρος (wind) 367,  
 403.  
 οὐς 386, 403.  
 οὐτάω 737.  
 οὐτός 543.  
 οὐτοσί 396.  
 οφείλω 678.  
 οφέλλω 510, 678.  
 οφέλος 510.  
 οφθαλμός 463.  
 οφίς 134, 194, 464,  
 482, 483, 505.  
 οφρα 687.  
 οφρανσπασίθης  
 496.  
 οφρυγή 599.  
 οφρυγνή 599.  
 οφρύη 295, 599.  
 οφρύεις 295, 496.  
 οφρύς 295, 495,  
 496, 720.  
 οχεά, οχεή 725.  
 οχέομαι 192.  
 οχετός 192.  
 οχεύω 192.  
 οχημα 192.  
 οχέω 193.  
 οχθος 63.  
 οχλεύς 193.  
 οχλέω 192, 193.  
 οχλος 191, 192, 193,  
 601.  
 οχος 33, 192.  
 οχυρός 193.  
 οψ 53, 118, 263,  
 459, 671.  
 οψέ 712.  
 οψι- 712.  
 οψι 712.  
 οψιμαθής 712.  
 οψινοος 712.  
 οψις 55, 101, 463.  
 οψιτέλειστος 712.  
 οψομαι 55, 101, 105,  
 118, 463, 671.  
 οψον 466, 687, 709.  
 π accessory 60; from  
 Indogerm. k 459,  
 680; π from f  
 380; π by the side  
 of β 537 ff.  
 πά 268, 269.  
 πάγη 267, 268.  
 πάγος 267, 307,  
 521.  
 πάγχυ 521.  
 Παγώνδας 646.  
 πάγίς 271.  
 πάθη 502.  
 πάθος 53, 63, 67, 270.  
 παιδίον 545.  
 παιδνός 590.  
 παίζω 629.  
 παιπάλη 288.  
 παιπάλλω 232, 680.  
 παῖς, παῖς 271, 287,  
 517, 629, 639.  
 παῖσα 667.  
 παιφάσσω 296.  
 παῖω 268, 517.  
 παλαιδέτης 658.  
 παλαιστή 268.  
 παλαιστρικός 642.  
 παλαῖω 268.  
 παλαμάομαι 268.  
 Παλαμών 268.  
 παλάμη 268.  
 Παλαμήδης 268.  
 παλάσσω 288, 730.  
 παλαστή 268.  
 παλέω 453.  
 παλέω 288.  
 πάλη (pollen) 288.  
 πάλη (wrestling)  
 268.  
 παλιμπλαγχθείς 278.  
 πάλιν 268.  
 παλινάγρετος 170.  
 παλινόρσος 556.  
 πάλκος 275.  
 Παλλάδιον 634.  
 πάλλω 181, 268.  
 παλμός 268.  
 πάλος 268.  
 παλύνω 288.  
 παματοφαγείσται  
 297.  
 Παμβωτάδα 647.  
 πάμπαν 467.  
 παμφαίνω 55, 296.  
 παμφανόων 296.  
 Πάν 270.  
 Πανδιονίς 641.  
 πανδός 507.  
 πάνδυρτος 725.  
 πανήγυρις 435, 714,  
 740.  
 πάνθηρ 438.  
 πάνια 270.  
 πανία 270.  
 πανίον 275.  
 Πανοπεύς 276.  
 πάνος 504.  
 πανούργος 580.  
 Πανόψια 472.  
 πανσυνδίη 648.  
 πανταχοῦ 521.  
 παντελώς 521.  
 πάνυ 467, 521.  
 Πάξος 601.  
 πάομαι 270, 282.  
 πάρ 268.  
 παρά 268, 269, 273,  
 274, 284, 309, 582.  
 παρά 403.  
 παραβαίνωριν 453.  
 Παράδοσος 696.  
 παραί 268, 269.  
 παραιρέω 269.  
 παραλαμβάνω 269.  
 παραμείβω 324.  
 παρόνομος 269.  
 παραύα 403.  
 παρδακός 537.  
 παρέδραθον 233.  
 παρείά 403.  
 παρείκω 663.  
 παρεσκενδάτο 652.  
 παρέχω 269.  
 παρήϊον 403.  
 παρήκω 269.  
 παρήγορος 348.  
 παρθένος 282.  
 Πάρις 278, 639.  
 Παρνασός 7.  
 πάρνοψ 471.  
 παροιμία 399, 401.  
 πάρος 269, 274, 284,  
 440.  
 πάρταξον 537.  
 παρτετύμβει 527.  
 πᾶς 467, 667.  
 Πασιθέη 520.  
 πασπάλη 288.  
 πάσσας 267, 319,  
 534, 674.  
 πάσσεται 270.  
 πάσχω 272, 42c,  
 701.  
 πατάνη 211.  
 πατέομαι 270, 502.  
 πατέω 270, 541.  
 πατήρ 11, 269, 440.  
 (Πάτιμος 727.)  
 πάτος 270.  
 πάτριος 270, 636.  
 πατρονέαν 609.  
 πατροφόνος 611.  
 πάτρω 270.  
 παῦλα 270.  
 παύομαι 270.  
 πανυρίδιος 634.  
 παῦρος 270, 346,  
 568, 682.  
 παῦς 287.  
 πωσσωλή 270.  
 παύω 270, 670.  
 παφλάζω 300.  
 πάχετος 521.  
 πάχνη 267, 307, 521,  
 534.  
 πάχος 521.  
 παχυλός 233.  
 παχύνω 521.  
 παχύς 233, 276, 521,  
 534.  
 πεδάω 245.  
 πέδη 245, 246.  
 πέδιλον 245.  
 πεδίον 245.  
 πέδον 79, 114, 241,  
 245.  
 πέζα 245, 618.  
 πέζος 44, 245, 618.  
 πείθομαι 261.  
 πείθω 52, 261.  
 πειθώ 261.  
 πείκω 163, 677, 678,  
 πείνα 271, 272.  
 πείρα 272.

- πρήγμα 521.  
 πρηδών 283.  
 πρήθω 63, 283.  
 πρημαίνω 283.  
 πρηνής 284, 306.  
 πρήξις 274.  
 πρήσσω 274.  
 πρηστήρ 283.  
 πρηύς 283.  
 πρήχμα 502, 521.  
 πρηών 284.  
 πρίαμαι 273, 274.  
 Πριαμής, Πριαμίδης 641.  
 Πρίαμος 729.  
 πρίν 283, 284.  
 πρύ 283, 285, 307, 309, 435, 501, 715.  
 προθέλυμος 257, 521, 715.  
 προιάλλω 551.  
 προίκτης 138.  
 προίσσομαι 138.  
 προκάς 275.  
 Πρόκνη 275, 728.  
 πρόμαχος 327.  
 Προμηθεύς 335.  
 πρόμος 73, 283.  
 πρύξ 275.  
 προοίμιον 401, 501.  
 προπαροίθεν 269.  
 προπετής 210.  
 προπηλακίζω 275, 369.  
 προπρηνής 707.  
 πρόβριζος 521.  
 πρύς 284, 285.  
 προσάρχομαι 190.  
 προσέτι 207.  
 πρόσεψις 468.  
 προσήλυτος 556.  
 προσηνής 305, 306.  
 πρόσθε(ν) 284.  
 προσκυνέω 159.  
 πρόσπαιος 268.  
 πρόσσω 283, 284, 290.  
 πρύσω 283, 309.  
 πρότανις 715.  
 πρύτερος 283.  
 πρυτί 208, 211, 284, 285, 461.  
 προσσελέω 569.  
 προφερός 300.  
 προσφέρω 300.  
 πρύχνη 178, 180, 307, 521.  
 πρύαφος 464.  
 πρύμνα, πρυμνός 715.  
 πρυμνήσιος 634.  
 πρύτανις 283, 435, 715.  
 πρήν 283.  
 πρύξος 284, 619, 621.  
 πρύων 284.  
 πρύξ 275.  
 πρύρα 284.  
 πρύτος 73, 283.  
 (psumi 613.)  
 πρύαιω 210.  
 πρύαννυμαι 706.  
 πρύαία 211.  
 πρύον 498.  
 πρύερα 498.  
 πρύερον 210, 709.  
 πρύερος 210.  
 πρύεσσω 675.  
 πρύσσω 61.  
 πρύλον 210.  
 πρύσάνη 498.  
 πρύσις 498.  
 πρύσιμος 498.  
 πρύσσω 276, 277, 498, 665.  
 πρύλεμος 498.  
 πρύλλεθρον 281.  
 πρύλλις 117, 281, 498, 499.  
 πρύρθος 14.  
 πρύταλον 285.  
 πρύτον 498.  
 πρύτω 706.  
 πρύσσω 498, 507, 529.  
 πρύχευ 529.  
 πρύχη 498, 507.  
 πρύων 280, 285, 498, 675, 676.  
 πρύωμα 210.  
 πρύώξ 61.  
 πρύσις 210.  
 πρύσκαζω 700.  
 πρύσσω 61.  
 πρύσχος 702, 710.  
 Πυνανέψια, Πυνανειών 471 f.  
 πρύανος 471, 472.  
 πρύγη 525.  
 Πυνγαίος 286.  
 πυνγαίος 287.  
 πύγμαχος 286.  
 πυνγή 286.  
 πυνγών 286, 525.  
 Πύθνα 471.  
 πύελος 279.  
 πύεω 286.  
 πύεδών 286.  
 πύεθνη 282, 527.  
 πύθω 63, 286, 420.  
 Πύθων, Πύθων 286.  
 πύρ 286.  
 πύκα 525.  
 πύκάζω 525.  
 πύκινός 286, 714.  
 πύκνός 286, 431, 525.  
 πύκτης 286.  
 πύλαυρός, πύλαυρός 346, 347.  
 πύλευρός 347.  
 πύλη 78, 715.  
 πύματος 433, 716.  
 πύνδαξ 262, 527.  
 πυνθάνομαι 261.  
 πύννος (πύνος) 716.  
 πύξ 286, 362, 525, 714.  
 πύον 286.  
 πύρ 5, 286.  
 πύρα 286.  
 πύράγρα 170.  
 πύραθος 694.  
 πύρέσσω 343.  
 πύρετός 286, 343.  
 πύρην 287.  
 πύρνος 287.  
 πύρός 287.  
 πύρριχη 703.  
 πύρβος 286, 431.  
 πύρσός 286.  
 Πύσιος 262.  
 πύσμα 261.  
 πύστις 261.  
 πύταμος 215.  
 πύτιζω 285.  
 πύλλεομαι, πύλλεω 470.  
 πύλλον 287.  
 πύλλος 287.  
 πύμμα 280.  
 πύμων 280, 434, 712.  
 πύς 90, 466, 472.  
 πύω 268, 281, 395.  
 ρ, aspiration and pronunciation 350, 454; ρ from σ 453 f., from φ 455, 601; anticipated ρ 285.  
 ρά 341, 436, 687.  
 ράβδος 351, 654, 655.  
 Ραβίνθιος 729.  
 ραγέως 185, 186.  
 ραδαλός 352.  
 ράδαμος 352, 530.  
 ράδαμος 352.  
 ραδές, ραδινός 352.  
 ράδις 352.  
 ραθαίνω 229, 523.  
 ραθάμυξ 11, 229, 523.  
 ραθάσσω 229, 523.  
 ραιβός 480, 481.  
 ραίνω 138, 229, 523.  
 ράκος 180, 186, 542, 555, 674.  
 ρακτοί 160.  
 ρανίς 229.  
 ραπίς 351, 654, 655.  
 ράπυς 350, 511, 724.  
 ρατάνη 587.  
 ραφανίς, ραφανος 350.  
 ράφης 350, 511.  
 ράχετρον 350.  
 ραχία 350, 508, 542.  
 ραχιαίος 350.  
 ράχης 350.  
 ραχίτης 350.  
 ράχος (thorn-hedge) 350.  
 ράχος (rag) 350.  
 ραψαφύδος 248.  
 ρεγέως 186.  
 ρέγκω 504.  
 ρέγμα 185.  
 ρέγος 185.  
 ρέγκω 504.  
 ρέδω 622, 636, 670.  
 ρέεθρον 352.  
 ρέζω (dye) 185, 619, 724.  
 ρέζω (do) 181, 186, 380, 491, 620, 622, 636, 670.  
 ρεία 634.  
 ρεκτός 622.  
 ρέμβω 351.  
 ρέος 352.  
 ρέπω 350.  
 ρεύμα, ρεύσεις, ρεύστος 352.  
 ρεχθέν 622.  
 ρέω 352, 353, 692.  
 ρηγέως 185, 186.  
 Ρηγίλαος 185.  
 Ρήγιον 185.  
 ρήγμα 542.  
 ρηγμίν 542.  
 ρηγνυμι 51, 57, 535, 542, 674.  
 ρήγος 186.  
 ρηίδιος 634.  
 ρήμα 343, 611.  
 ρήν 345.  
 Ρήνεια 345.  
 ρήνις 345.  
 ρήσις 343.  
 ρήσκω 343.  
 ρήσσω 674.  
 ρητός 343, 622.  
 ρήτρα 343.  
 ρήτωρ 343.  
 ρηχίη 508, 542.  
 ρίγα 379, 455.  
 ριγεδανός 351.  
 ριγέω 351.



βιγηλός 351.  
 βίγιον 351, 631.  
 βίγος 351.  
 βιγός 351.  
 βίδαμός 530.  
 βίζα 348, 352, 530,  
 619, 660, 712.  
 βίον 348, 712.  
 βιπή 351.  
 βιπίζω 352.  
 βιπίς 352.  
 βίπτω 351, 713, 724.  
 βίψ 352, 511.  
 βογός 185.  
 βοδαλός 352.  
 βόδαμος 352.  
 βοδανός 352.  
 βοδόν 352.  
 βοή 352.  
 βοθύν 353.  
 βόθος 353.  
 βοιά 657.  
 βοιβδος 650, 680.  
 βοϊζος 650, 680.  
 βόμβος 351.  
 βόμμα 295.  
 βόος 352.  
 βόπαλον 351.  
 βοπή 350.  
 βοπτός 295.  
 βόπτρον 351.  
 βουβοτός 295.  
 βοφάνω 295.  
 βοφείω, βόφημα 295.  
 βύαξ 352, 655.  
 βύβδην 649.  
 βύγχος 504.  
 βύδην 649.  
 βυδία 657.  
 βυδόν 649.  
 βύζω 349.  
 βυθμός 352, 353.  
 βυκάνη 529.  
 βύμη 352, 353.  
 βύσις 352.  
 βυστάζω 345, 630.  
 βυτήρ 345.  
 βυτός 352.  
 βυτός 345.  
 βυφείω 295.  
 βωγαλός 542, 565.  
 βωδιός 345.  
 βώθων 353.  
 βώμη 353, 504.  
 βάννυμι 353.  
 βέω 353, 578.

σ; σ assimilated  
 665; initial σ lost  
 442; expanding σ  
 383 (his); from τ  
 430; treatment of

the σ before μ  
 433; its aspirat-  
 ing power 503;  
 sporadic 630.  
 σά 608.  
 σάγη 674.  
 σάινω 695.  
 σάκος 674.  
 σαλαγέω 372.  
 σαλαγή 372, 675.  
 σαλάκων 372, 675.  
 σάλαξ 372, 675.  
 σαλάσσω 372, 675.  
 σαλεύω 372.  
 σάλη 372, 695.  
 σάλος (shaking)  
 372, 529, 695.  
 σάλος (spittle) 372,  
 395.  
 σαλπιγγολογχυπηνά-  
 δαι 646.  
 σάλπιγξ 287, 412,  
 429.  
 σαλπιδδω 622.  
 σαλπίζω 287, 620,  
 622, 673.  
 σαλπίσσω 673.  
 σαλύγη 372.  
 σάμβαλον 484.  
 σάνδαλον 484.  
 σάος 378, 412.  
 σαός 378.  
 σαπρός 512.  
 Σαπρός 699.  
 σαργάνη 381.  
 Σαρπηδών 265.  
 σάττω 674.  
 σαναρός 380.  
 σαικόν 393.  
 σαφής 512, 685, 699.  
 σάω 379.  
 Σάω 378.  
 σβέννυμι 573, 588,  
 706.  
 σδυγόν 699.  
 σέ 219.  
 σέβας 481, 541.  
 σεβερός 481.  
 σεβίζω 541.  
 σέβω 481, 541, 591.  
 σέδας 241, 246, 373.  
 Σείρ 551.  
 σειρά 353, 354, 685.  
 σειρίασις 551.  
 σειριάω 551.  
 σείριμος 551.  
 Σείριος 400, 551,  
 552, 695.  
 σείω 372, 395.  
 σέλας 551, 695.  
 σελήνη 400, 551.  
 σελίς 372.

σελλίζομαι 696.  
 Σελλοί 548.  
 σέλματα 372.  
 σεμνός 480, 481, 591.  
 Σενοφίλου 696.  
 σεργοί 600.  
 σερίς 353.  
 σερός 201.  
 σέσυφος 512.  
 σεύω 382.  
 σf initial 429.  
 σfe 396, 443, 635.  
 σήθω 63, 379, 667,  
 686.  
 σηκός 155, 161.  
 σήλατο 372.  
 σήμερον 394, 595.  
 σήπω 464, 512.  
 σήστρον 379, 667.  
 σήτες 208, 394.  
 -σθαι 63.  
 σθενάρος 503.  
 Σθένης 503.  
 σθένης 503.  
 σθένης 212, 423,  
 503, 504.  
 σθένω 503.  
 σιά 713.  
 σιάι 285.  
 σιάλον 372, 412,  
 614.  
 σιάλος 372, 615,  
 717.  
 σιαλώδης 372.  
 σίγα 379.  
 σιγαλούς 615.  
 σιγάω 379, 739.  
 σιγή 379, 412, 529,  
 535, 695.  
 σιγηλός 379.  
 σίδηρος 246, 412,  
 429, 695.  
 σίκα 382.  
 Σιμωνιδεύς, Σιμωνί-  
 δης 647.  
 σινάμορος 330.  
 σινιάζω 379.  
 σινίον 379.  
 σιπαλός 502.  
 σίπτα 379.  
 Σίσυφος 512, 605,  
 716.  
 σίττακος 696.  
 σιφλός 502.  
 σιωπάω 379, 749.  
 σιωπή 379, 529.  
 σκάζω 166, 380.  
 σκαίος 166, 692.  
 σκαιοσύνη, σκαίότης  
 166.  
 σκαίρω 694, 697,  
 712, 721, 722.

σκάλεθρον 697.  
 σκάλεθρον 697.  
 σκαλεύς 552.  
 σκαλεύω 697.  
 σκαληνός 373.  
 σκαλός 60, 552.  
 σκάλλω 60, 166,  
 552, 697, 707.  
 σκάλη 552.  
 σκάλοψ 56, 60, 166,  
 696, 700, 730.  
 Σκάμανδρος 693.  
 σκανδάληθρον 166.  
 σκάνδαλον 166.  
 σκάνθαν 505.  
 σκαπάνη 167.  
 σκάπετος 167, 693.  
 σκάπος 167.  
 Σκαπησύλη 373.  
 σκάπτω 167, 692,  
 694.  
 σκαρίζω 697, 721.  
 σκάριφος 533, 694,  
 729, 730, 731.  
 σκαρφάω 694.  
 σκαρφίον 694, 729.  
 σκάρφος 533.  
 σκαυρός 166.  
 σκάφη 167, 51.  
 σκαφίον 167.  
 σκαφός 694.  
 σκάφος 167, 512,  
 694, 697, 715.  
 σκαφώρη 167, 694.  
 σκεδάννυμι 62, 246,  
 693, 711.  
 σκεδασίς 246.  
 σκελός 503.  
 σκέλος 503.  
 σκεοθήκας 570.  
 σκεπάω 705.  
 σκεπανός 705.  
 σκέπαρνον 145, 153,  
 167, 693.  
 σκέπας 168, 705.  
 σκεπάω 705.  
 σκέπη 705.  
 σκέπτομαι 101, 105,  
 168, 432, 465,  
 676, 697.  
 σκέπω 705.  
 σκεράφος 503.  
 σκενάζω 169.  
 σκενή 169.  
 σκευός 169.  
 σκηνή 168.  
 σκηνίπτω 533, 731.  
 σκηπίων 525.  
 σκηπτός 167.  
 σκῆπτρον 167.  
 σκῆπτω 167, 525,  
 692, 711.

- τάρβος 480.  
 ταργαίνω 480.  
 ταργάνη 381.  
 ταριχεύω 729.  
 τάριχος 729, 729.  
 ταρσιά, ταρσός 224.  
 ταρταρίζω 504.  
 ταρφέες, τάρφος 224.  
 τάρχη 729.  
 ταρχίω 729.  
 τάσις 217.  
 τάσσω 674.  
 τά τ' ἄλ 436.  
 Ταυγетος 226.  
 ταῦνας 226.  
 ταῦρος 218, 429, 567, 695.  
 ταῦς 226.  
 ταφή 512.  
 ταφήσιος 650.  
 τάφος (astonishment) 219, 429 504, 527, 695.  
 τάφος (burial) 512.  
 τάφρος 512, 513.  
 τάχος 218.  
 ταχύς 196, 218, 507.  
 ταῶν, ταῶς 495.  
 τέ 138, 486, 487.  
 τε (pronom.) 21.  
 τέγγω 219, 455, 535, 711.  
 Τεγέα 186.  
 Τεγεάτης 644.  
 τέγη 186, 695.  
 τέγξις 219.  
 τέγος 56, 186, 429, 695.  
 τεθαφθαι 419.  
 τέθηπα 219, 527.  
 τείνω 64, 65, 217, 255, 664.  
 τέιρεα 206.  
 Τειρεσίας 645.  
 τείρω 60, 222.  
 Τεισίας 489.  
 τειχεσιπλήτης 278.  
 τείχος 182, 220.  
 τείω 488, 489.  
 τείως 577.  
 τέκμαρ 58, 219, 594.  
 τεκμήριον 219.  
 Τέκμηρσσα 219.  
 (τεκνίτης 417.)  
 τέκνον, τέκος 219.  
 τέκτων 58, 157, 219, 220, 431, 698.  
 τελαμών 220.  
 Τελαμωνιάδης, Τελαμωνιάς, Τελαμώνιος 635, 646.  
 τελέθω 63.  
 τέλειος 222, 610.  
 τελείω 68, 327.  
 Τελεμσσης 730.  
 τέλειος 610.  
 τελευτή 222.  
 τελέω 222, 238, 327.  
 τέλλω 221, 488.  
 τέλος (end) 221, 222, 238, 488, 558, 587.  
 τέλος (tax) 221.  
 τέλσας 488.  
 τέλσον 487.  
 (τέλω 417.)  
 τέμαχος 212, 221, 222, 731.  
 τέμενος 221, 329, 510, 730.  
 τέμνω 221, 654, 677.  
 τέναγος 219.  
 τένω 221.  
 Τένεδος 629.  
 τένηης 221.  
 τενηρηδών 239, 257.  
 τενηρήνη 257.  
 τένω 664.  
 τένω 217.  
 τέο, τέω etc. 608.  
 τέος 219.  
 τέραμον 216.  
 τέραμος 475.  
 τέρας 206, 587, 695.  
 τέρεμος 430, 475.  
 τέρετρον 222, 729.  
 τερέω 222, 223.  
 τέρην 223.  
 τερερία 257.  
 τέρερον 222.  
 τέρμα 222, 558.  
 τερμύεις 222.  
 τέρμος 222.  
 τέρμων 222.  
 τερπικέρανος 468.  
 τερπνός 224, 264.  
 τέρπω 224, 512.  
 τερπωλή 224.  
 τερπώμεθα 468.  
 τερσαίνω, τέρσομαι 224.  
 τέρτος 226.  
 τερύ 113, 223.  
 τερύνης 223.  
 τερύσσω 223.  
 τέρψις 224.  
 τέσσαρες 27, 487, 488, 537, 601, 665.  
 τεταγών 218.  
 τέτανος 217.  
 τέταρτος 488.  
 τέτορες 488.  
 τετράζω 225.  
 τετραίνω 222.  
 τετράκις 488.  
 τέτραξ 225.  
 τέτρατος 488.  
 τετράτρικος 707.  
 τετραχθά 676.  
 τέτραχμον 710.  
 τετράων 225.  
 τετρεμαίνω 225.  
 τέτρηχα 729.  
 τέτριγα 695.  
 τέτριξ 225.  
 τέττα 225.  
 τετύκοντο 58, 219, 220, 507.  
 Τεύκρος 219, 507.  
 τεύξομαι 507.  
 τεύχος 219.  
 τεύχω 58, 219, 507.  
 τέφρα 35, 501, 502, 512.  
 τέφρος 501.  
 τέχνη 219, 502.  
 τεχνητής 639.  
 τεχνίτης 644.  
 τή 64, 217.  
 τήγανον 218, 444, 535.  
 τηθαλαδοῦς 255, 636.  
 τήθη (nurse) 252.  
 τήθη (grandmother) 255.  
 τηθίς 255.  
 Τηθίς 253.  
 τηκεδών 218, 653.  
 τηκώ 61, 218, 444, 535.  
 τηλεθάω 137.  
 τηλεφανής 290.  
 τηλίκος 396.  
 τηλόθεν 469.  
 τηλύγετος 490.  
 τήμερον 394, 595.  
 τήμος 594.  
 Τήν 621, 623.  
 τήος 577, 594.  
 τητάομαι 213, 742.  
 τήτες 208, 394.  
 τί 27, 447, 489.  
 τιθασός 253.  
 τίθημι 62, 253, 254.  
 τιβήνη 252.  
 Τιθωνός 512.  
 τίκτω 58, 219, 677.  
 τιμάρος 346, 347.  
 τιμάω 488.  
 τιμή 488, 489.  
 τιμήεις 489.  
 τίμημα 488, 489.  
 τιμήορος 347.  
 τιμητής 488.  
 τιμωρός 346, 347.  
 τινάγματα 490.  
 τινάγμος 490.  
 Τινάδιος 634.  
 τινάσσω 490, 725.  
 τίνυμαι 488.  
 τινύω 729.  
 τίνω 488, 729.  
 τίπτε 687.  
 τίρ 453.  
 τίριος 515, 520.  
 Τίρυνς 495.  
 τίς 453, 486, 489, 499.  
 τίσις 488.  
 τιταίνω 217.  
 Τίταν 605.  
 τίτθη 252, 253.  
 τίτθος 252.  
 τιτρώω 222, 223.  
 τιτρώσκω 223, 710.  
 Τιτυός 226.  
 Τίτυρος 512, 605.  
 τίω 434, 488.  
 τίω, τίοισι 490, 608.  
 Τλασίαφο 396, 450.  
 τλήμων 220.  
 τλήναι 220.  
 τλητός 216.  
 Τμάρος 731.  
 τμήγω 221, 731.  
 τμήμα 221.  
 τμήσις 176, 634, 705.  
 Τμώλος 556, 731.  
 τοίς, τοίρ 453.  
 τοίχος 182, 183.  
 τόκα 487.  
 τοκεύς 219.  
 τόκος 187, 219, 252, 304.  
 τόλμα, τολμάω 220, 708.  
 τολμηρός 708.  
 τολυπεύω 221.  
 τολύπη 221, 730.  
 Τόμαρος 731.  
 τομάω 314, 320.  
 τομεύς, τομή 221.  
 τονθορίζω 257.  
 τονθρύς 257.  
 τόνος 217, 695.  
 τοξάζομαι 628.  
 τόξον 58, 219.  
 τοξότης 628.  
 τόπος 695.  
 τορεύω 222.  
 τόρνος 222, 729.  
 τορόνος 729.  
 τορός 222, 273.  
 τόρος 222.



- τοῦνη 223.  
 τόσσαις 219.  
 τότε 487.  
 τοῦ, τούν 219.  
 τόφρα 687.  
 τρανής 222.  
 τράπεζα 382, 488, 618, 710.  
 τραπείομεν 224.  
 τραπέλος 558.  
 τραπέων 468.  
 τράπω 468.  
 τρασιά 224.  
 τραῦμα 223.  
 τραφερή 224.  
 τραφερός 558.  
 τρέ 77, 445.  
 τρεῖς 226.  
 τρέω 225, 665.  
 τρέμω 225.  
 τρέπω 52, 432, 468, 568.  
 τρέφω 224, 415, 512, 527.  
 τρέχω 196.  
 τρέω 225.  
 τρηρός 225, 646.  
 τρήρων 225, 646.  
 τριακοντούτης 208.  
 τρίβω 222, 223, 475, 713.  
 τριένος 546.  
 τρίζω 695.  
 τριήρης 342.  
 τρίναξ 501.  
 τρισπίς 464.  
 τρισπίς 464.  
 τρίς 226.  
 τρισσός 226.  
 τρίτατος 642.  
 τρίτος 226.  
 τρίχα 163, 675, 676.  
 τριχάικες 163.  
 τριχθά 675, 676.  
 Τροζήνιοι 632, 656.  
 Τροία 222, 632.  
 Τροισήν 222, 632.  
 Τροισήνιοι 632, 656.  
 τρομερός 225.  
 τρομέω 225.  
 τρώμος 225.  
 τρώνα 224, 501.  
 τρώπαιον 189.  
 τροπείον 468.  
 τροπή 189, 468.  
 τρώπηλις 468.  
 τρώπις 468.  
 τροπός 568.  
 τρόπος 52, 468.  
 τροφαλῖς 527.  
 τρώφι 224.  
 τρώφιος 679.  
 τρώχιλος 679.  
 τρώχης 196, 645.  
 τρώχος, τροχός 196.  
 τρυγῶν 598, 599.  
 τρύγη 599.  
 τρυγητάριος 723.  
 τρυγονάω 501.  
 τρύζω 695.  
 τρύμα 222.  
 τρύπα 223.  
 τρύπανον 74, 223.  
 τρυπάω 60, 223, 714.  
 τρύπη 60.  
 τρύσκω 223, 710.  
 τρυφάλεια 488, 710.  
 τρυφή 223.  
 τρύχω 222, 223, 710.  
 τρύω 60, 222, 710.  
 τρώκτης 468.  
 τρώξ 468.  
 Ττήνα 621, 674.  
 τυ 219, 442, 696.  
 τυγχάνω 219, 220, 507.  
 Τύδας 226.  
 Τυδεύς 226, 227, 695.  
 τύκον 667.  
 τύκος 58, 219, 507.  
 τύλη, τύλος, τυλόω 226.  
 τυμβογέραν 527.  
 τύμβος 527.  
 τυμβοχοεύς 527.  
 τύμμα 227.  
 τύμπανον 55, 227.  
 Τυμφορηστός 228.  
 Τύμαιλος 556, 731.  
 Τυνδάρεος, Τυνδάρεως, Τυνδάρης, Τυνδαριδῶν, Τυνδάριχος 226.  
 Τυνδαρίς 641.  
 τυνός, τυνοῦτος 495.  
 τύπανον 55.  
 τυπάς 227.  
 τυπή 227.  
 τύπος 227, 499.  
 τύπτω 227, 429, 512, 65, 676, 695.  
 τύρβα, τυρβάζω 227, 695.  
 τυρβασία 227.  
 τύρβη 227, 381, 429, 695.  
 τυρένομαι 227.  
 τυρίσδω 354.  
 Τυρμίδαι 227.  
 τύρος 227.  
 Τύρραιος 635.  
 τυτθός 253, 495.  
 τυφεδανός, τυφεδάν 228.  
 τυφλός 228.  
 τυφός 228, 527.  
 τύφω 49, 60, 228, 259.  
 τυφών, τυφώς 228.  
 τύχη 219.  
 τῶνα 621.  
 v pronunciation 412;  
 v from orig. a 714 ff.; v from orig. u 411, 571;  
 v from j 612; v from f 563 ff.; v from f, fo 176, 245; v interchanged with i 716 ff.  
 ύαινα 382.  
 ύακινθος 279, 574.  
 ύάλη 564, 576.  
 ύάλεον 395.  
 ύάλομαι 564.  
 ύαλος 395, 565.  
 'Υάνθεια 574.  
 ύανία 565.  
 'Υβλα 532.  
 ύβός 529.  
 ύβρίζω 630.  
 ύβρις 290, 540.  
 ύγγεμος 614.  
 ύγεία 187.  
 ύγιάζω, ύγιαίνω, ύγίαια 187.  
 ύγιηρός 187.  
 ύγιής 187, 678, 739.  
 ύγραίνω 187.  
 ύγρός 28, 187, 350.  
 ύγρότης 187.  
 ύδαρης, ύδαρός 248.  
 'Υδατοσύδνη 654.  
 ύδερος 248.  
 ύδέω 248.  
 ύδης 248.  
 ύδνέω 249.  
 ύδνη 654.  
 ύδνης 242, 245, 248.  
 ύδνης (watery) 249.  
 ύδος 71, 249, 403.  
 ύδρα 248.  
 ύδραῖνα, ύδρεύω 248.  
 ύδρία 248.  
 ύδρος 248.  
 ύδρωψ 248.  
 ύδω 248.  
 ύδωρ 71, 72, 248, 249, 285, 523, 688.  
 ύει 395 (bis).  
 'Υέλη 360, 564.  
 ύελος 395.  
 ύεσις 376, 564.  
 ύεστάκα 564.  
 ύετής 208.  
 ύετός 395.  
 ύηνία 565.  
 ύηνός 565.  
 ύθλος 523.  
 υίήν 564.  
 υίδεύς 647.  
 υίδους 636, 647.  
 ύίλη 564.  
 υίόν (wild vine) 564.  
 υίός 395, 566, 654.  
 υίανός 391.  
 ύλακόμωρος 330, 371.  
 ύλακτέω 371.  
 ύλάω 371.  
 ύλη 109, 373.  
 ύλεις 373.  
 ύλημα 373.  
 ύλία 373, 374.  
 ύλλος 248.  
 ύμεῖς 397, 687.  
 ύμμες 397, 402, 687.  
 ύμνέω 716.  
 ύμνος 295.  
 ύνις 382.  
 ύννη 382.  
 ύός 395.  
 ύπαί 290.  
 ύπάρχω 190.  
 ύπατος 290.  
 ύπέρ 289, 290, 682.  
 ύπένερθε 309.  
 ύπέρ 289, 290, 540, 688.  
 ύπέρα 289, 290, 540.  
 ύπεράφανος 290.  
 ύπέρβιος 476.  
 'Υπερβύρειοι 348.  
 ύπερβάϊα 586.  
 ύπερηγορή 609.  
 ύπερηφάνεια, ύπερηφανέων, ύπερήφανος 290.  
 ύπερθεν 289.  
 'Υπερίων 540.  
 ύπερον 540.  
 ύπερος 289, 540.  
 ύπερτεῖλας 221.  
 ύπέρφεν 304, 718.  
 ύπερφίλιος 717.  
 ύπερφυής 718.  
 ύπεράνω 207, 586.  
 ύπήνη 305, 306.

- ὑπηρέτης 342, 343.  
 ὑπνος 61, 248, 289.  
 ὑπό 33, 290, 540, 688.  
 ὑποβρύχιος, ὑπόβρυ-  
 χος 715.  
 ὑποδδείςαντες 663.  
 ὑποδενδρῶν 239.  
 ὑπόδρα 134.  
 ὑποείξω 135.  
 ὑποθέναρ 255.  
 ὑποίξεσθαι 656.  
 ὑποκρίνομαι 156.  
 ὑπολείπω 462.  
 ὑπολίξω 370, 620.  
 ὑπομαστίδιος 253.  
 ὑποπετρίδιος, ὑπό-  
 πτερος 709.  
 ὑπόφανσις 296.  
 ὑποχείριος 199.  
 ὑπόψιος 648.  
 Ὑππάγρα 718.  
 Ὑππασία 718.  
 ὕπτιος 284, 290.  
 ὕραξ 354.  
 ὕρειγαλέον 565.  
 Ὑββάδιος 634, 648.  
 ὕρχη 350.  
 ὕς 246, 381, 412, 431, 565.  
 ὕσμων- 62, 397, 433, 595.  
 ὕσπληξ 228, 277.  
 ὕστατιος 676.  
 ὕστατος 228, 676.  
 ὕστέρη 228.  
 ὕστερος 228, 688.  
 ὑφαίνω 61, 295.  
 ὑφάω 295.  
 ὑφή 295.  
 ὑφήφασμαι 61, 296.  
 ὕφος 295.  
 ὑψηλός 290.  
 ὑψιβρεμέτης 530.  
 ὑψιπέτης 211.  
 ὑφόροφος 715.  
 ὑψού 290.  
 φ accessory 60 f.;  
 φ from gh 181 f.;  
 from π 214, 228, 508, 510; from f 380, 393, 443, 542, 600 f.; its Latin representa-  
 tives 438; of late origin 153, 167; χ and φ 482; χ = θ in Aeol. 484.  
 φάβος 296.  
 φαγάς 297.  
 φαγεῖν 28, 114, 188, 297.  
 φαγόνες 244, 297.  
 φάε 296, 297.  
 φαίθω 63, 296, 297.  
 φαεινός, φαείνω 296.  
 φάεννος 296.  
 φαεσίμβροτος 297.  
 φαίδει 657.  
 φαίδιμος, φαιδρός 657.  
 Φαίδων 657.  
 φαινόλης 642.  
 φαίνω 64, 113, 115, 296, 297, 605.  
 φαῖος 296.  
 φαιρίδδω 443.  
 φακός 297.  
 φαλακρός 297.  
 φάλαρα 297.  
 φαληριῶν 297.  
 φαληρός 297.  
 φαλιός 297.  
 φάληρης 169.  
 φαλός 297.  
 φανερός 296.  
 φανή 296.  
 φανός 296.  
 φᾶνος 504.  
 φάος 113, 296.  
 φάραγξ 298.  
 φάρετρα 115, 221, 299.  
 φάρκες 300.  
 φαρκίς 298.  
 φάρμακον 300, 496, 642.  
 φαρμάσσω 629.  
 φάρξαι 302.  
 φᾶρος 108, 300.  
 φάρος 298.  
 φάρως 298.  
 φάρσος 298, 356.  
 φάρυγξ 186, 298, 535, 738.  
 φαρυμός 256, 484.  
 φάρω 298.  
 φάσις 296.  
 φάσκα 296.  
 φάσμα 296.  
 φάτις 208, 296, 433, 611, 639.  
 φάτνη 502.  
 φάτος 299.  
 φάτρα 709.  
 φατρία 709.  
 φαῦος 65, 296.  
 φανσίμβροτος 296.  
 -φασιν 297.  
 φέβομαι 298.  
 φέγγος 504.  
 Φειδίας 645.  
 φέννος 600.  
 φεύς 485.  
 φέρβω 300, 359.  
 φέρε 300.  
 φέρενα 729.  
 φέρετρον 299.  
 φέριστος 300.  
 φέρμα 299.  
 φερνή 299, 729.  
 φέρτατος, φέρτερος 300.  
 φέρω 34, 52, 98, 105, 115, 282, 299, 554.  
 φέσπερε 600.  
 Φετταλός 484.  
 φεύγω 189.  
 φέφαλος 700.  
 φή 394, 442, 700.  
 Φήγεια 188.  
 φηγιμένος 188.  
 φήγιμος 188, 642.  
 φηγός 188, 297.  
 φηγών 188.  
 φηγιότης 373.  
 φηλός 373.  
 φημ 296.  
 φημί 64, 296.  
 φήρ 256, 484.  
 φηρίον 484.  
 Φήστος 520.  
 φθαίρω 682.  
 φθάνω 704.  
 φθατήση 704.  
 φθέγγω 704.  
 φθέρω 607, 609, 664, 682.  
 φθέρω 569, 609, 664.  
 φθίδιος 648.  
 φθινύθω 63.  
 φθίσις 705.  
 φθόγη 705.  
 φθούσδω 699.  
 φῖ 443.  
 φιάλη 508, 517.  
 Φιαλία 615.  
 φιαλῶν 508.  
 φιαρός 508, 509, 517, 600.  
 (Fibae 485.)  
 φιδάκη 261.  
 φιερός 600.  
 φίκατι 600.  
 φίλαξ 451.  
 φίλινα 653.  
 Φιλομήλα 329.  
 φιλομμεῖδης 329, 693.  
 φιλοσοφός 699.  
 Φίλοττος 647.  
 Φιλόφειρος 484.  
 φίν 394, 694, 700.  
 φίνακα 451.  
 φίντατος 450.  
 Φίξ 695.  
 φίτυμα 304.  
 φίτυς 304, 371, 530, 717.  
 φιτύς 304, 368, 717.  
 φλασμός 300.  
 φλάω 485.  
 φλέβα 302.  
 φλεβάζω 302.  
 φλεγέθω 63, 188, 556.  
 φλέγμα 188.  
 φλεγμονή 188.  
 φλεγυρός 188.  
 φλέγω 33, 188, 449.  
 φλέδων 301.  
 Φλεύς 301.  
 φλεύς 509.  
 φλέψ 302, 583.  
 φλέω 301.  
 Φλέων 301.  
 φληναφος 301, 496.  
 φλιαρός 482.  
 Φλιας 301.  
 φλίβω 485.  
 φλιδάνω 301.  
 φλιδή 301.  
 φλιμέλια 301.  
 Φλιούς 301.  
 φλοῖος 301.  
 φλοῖστος 301, 588, 723.  
 φλοῖω 301.  
 φλόξ 188.  
 φλύος 301.  
 φλύαξ 301.  
 φλύαρος 301.  
 φλυδάνω 301.  
 φλύζω 301.  
 φλύκταινα 301, 597.  
 φλυκτίς 301.  
 φλύος 301.  
 φλύσαι 301.  
 φλύω 301, 509, 531.  
 φόα 304.  
 φοβερός 298.  
 φοβέω 298.  
 φόβη 380.  
 φόβος 298, 359.  
 Φόβος 121.  
 φοίνα 484.  
 φοίνις 299.  
 φοιτάω 304.  
 φοῖτος 13, 23.  
 φολκός 169.  
 φονάω 320.  
 φονεύς 299.  
 φονή 299.  
 φόνος 299.



- φοξίχειλος 189.  
φοξός 13, 189.  
φορά 209, 300.  
φορβή 300, 438.  
φορέω 299.  
φόρκες 298.  
φορκόν 188.  
φόρμιγξ 287, 531, 535.  
φόρμικα 338.  
φορμός 299.  
φορός 299.  
φόρος 52, 221, 299.  
φόρτος 299.  
φούρκος 715.  
-φύων 297.  
φράγμα, φραγμός 302.  
φράγνυμι 302.  
φράζω 110, 115, 673.  
φρακτός 302.  
φράσσω (shut in) 115, 302, 674.  
φράσσω (φράζω) 673.  
φράττηρ 302.  
φράτρα 302, 709.  
φρατρία 302, 709.  
φρατριάζω, φρατρίζω 302.  
φράτριοι 302.  
φράττω (φράζω) 673.  
φράττωρ 302.  
φρέαρ 246, 303, 494.  
φρήττηρ, φρήττηρ 302.  
φρίκη 351.  
φρίξ 351.  
φρίσσω 351, 483, 676.  
φροίμιον 501.  
φρόνος 484.  
φροντίς 639, 640.  
φρούδος 307, 501.  
φρουρά, φρουρός 346, 501.  
φρύγανον 188.  
φρύγετρον 188.  
φρύγω 188, 674, 714.  
φρυκτός 188.  
Φρύνη 303, 304.  
φρύνη 303.  
Φρύνηχος, Φρυνίων, Φρύνος 303.  
φρύνος 303, 304.  
Φρυνάνδης 303.  
φρύσσω 674.  
φυγίς 189, 644.  
φύγεθλον 302.  
φυγή 189.  
φύζα 189, 491, 620.  
φυζακινός 491, 620.  
φυζαλέος 491, 620.  
φυζηλός 620.  
φυή 304.  
φύια 304.  
φυλή 304.  
φύλλον 305, 496.  
φύλον 304.  
φύλοπις 276.<sup>1</sup>  
φύμα 304, 596.  
φύξιμος 189.  
φύξις 189.  
φύρκος 715.  
φύσα 509.  
φυσάλις, φυσαλλίς 509.  
φυσάω 509.  
φυσιάω 509.  
φυσίγναθος 509.  
φύσιγξ 535.  
φύσις 304.  
φύσκα 509.  
φύσκη 509.  
φύσκαν 509.  
φύτευμα 596.  
φυτεύω 304.  
φυτόν 373, 596.  
φύω 98, 304, 305, 718.  
φύω (θύω) 485.  
φώγανον 189.  
φώγω, φώζω 189.  
φωκτός 189.  
-φών 297.  
φωνή 296.  
φώρ 108, 299, 300, 330.  
φωρίδης 634.  
φῶς 298, 297.  
φώς 304.  
χ from κ 220; χ and φ 482.  
χάβος 198.  
χάζομαι 201.  
χάζω 247, 503.  
χαίνω 196, 200.  
χαίος 198.  
χαίρω 6, 121, 198.  
χάλαζα 196, 555, 619, 730.  
χαλαζάν 196.  
χαλαρός 201.  
χαλάω 197, 201.  
χαλεπαίνω 628.  
χαλινός 374, 506.  
χαλίφρων 201.  
χαλκός 197.  
χαλυβδικός, χαλύβδιος 654.  
χάλυψ 197, 654.  
χαμάδις 197, 650.  
χαμάζε 197, 633.  
χαμάθεν 197.  
χαμαί 197, 675.  
χαμαιεύνης 643.  
χαμηλός 197.  
χαμός 198.  
Χαμύνη 197.  
χανδάνω 196.  
χανδόν 629.  
χάννη 196.  
χάος 196, 506.  
χαρά (joy) 121, 198.  
χαρά (δργή) 198.  
χαράδρα 197.  
χάραξ 360.  
χαρείς 121, 198.  
χαρίζομαι 121, 198, 630.  
χάρις 121, 198, 199.  
Χάριτες 121.  
χάρμα, χάρμη 198.  
χαροπός 198.  
χάρων 198.  
χάσκω 196, 676.  
χάσμα 196.  
χατέω, χατίζω 200, 433.  
χατίς 200, 201.  
χαῦνος 65, 196.  
χέζω 196, 618.  
χειά 196, 200, 725.  
χείμα 201, 385.  
χειμάζω, χεимаίνω 201.  
χειμερινός 201.  
χειμέριος 201, 202.  
χειμών 201, 366, 385.  
χείρ 199, 552.  
χείριος 199.  
χείρων 140, 199, 681.  
χελιδών 199, 555, 712.  
χέλλιοι 199, 712.  
χελύνη, χέλυνον, χέλυνς 199.  
χελών, χελώνη 199.  
χερείων 199, 335.  
χέρης 199.  
χέρνιψ 317, 671.  
χέρρων 199.  
χερσαίος 642.  
χεσείω 199.  
χεῦμα 204.  
χέω 201, 204, 205, 627, 717.  
χήμη 196.  
χῆν 200.  
χῆρ 200.  
χῆρα 200.  
χηραμός 200.  
χηρεῖω 200.  
χῆρος 200.  
χηρώω 200.  
χηρωστής 200.  
χῆτις 433.  
χῆτος 200.  
χθαμαλός 197, 499, 544, 675, 715.  
χθές 201, 499, 652, 675, 676, 711, 723.  
χθεσινός 201.  
χθιζός 201, 619, 652, 711.  
χθών 197, 499, 544.  
χίλιοι 199, 712.  
χίμαιρα 202.  
χιμαρος 202.  
χίμετρον 201.  
χῖος 320.  
χιραλέος 712.  
χιτών 415.  
χιών 201, 544.  
χλαῖνα 546.  
χλαμύς 546, 637.  
χλαρός 202.  
χλεμερός 494.  
χλεμύρα 203.  
χλαινώ 656.  
χλιαρός 482, 656, 657.  
χλιδανός 656.  
χλιδή 656.  
χλίω 656, 657.  
χλοάζω 202.  
χλόδη 656.  
χλοερός 202.  
χλόη 202, 555.  
χλοιδάω 656.  
χλοιδή 656.  
χλός 202.  
χλουνός 204, 558.  
χλωρός 202, 555.  
χνοῦς 502.  
χόδανος 199.  
χσῆ 204.  
χοῖρος 203.  
χολάδες 203, 556.  
χολάω 203.  
χολή 203.  
χολικός 203.  
χόλις 203, 556.  
χόλος, χολώω 203, 482.  
χονδροκοπεῖον 465.  
χός 204.  
χορδή 203, 556.  
χόριον 508.  
χορός 199.  
χόρτος 200.  
χραίνω 60, 182, 204, 711.  
χραισμέω 680.

- χράομαι 200, 739.  
 χραύω 182, 204, 526.  
 χράω 182, 200.  
 χρεία 739.  
 χρεμετάω, χρεμετίζω 203.  
 χρέμης 203.  
 χρεμίζω 203.  
 χρέμπτομαι 60.  
 χρεμύλος 203.  
 χρέος 199.  
 χρή 199.  
 χρήσιμος 680.  
 χρίμα 204.  
 χρίμπτω 60, 204, 711.  
 χρίσις 204.  
 χρίσμα 204.  
 χρίω 204, 482, 712.  
 χροά, χροιά 204.  
 χρόμαδος 203, 221.  
 χρόμη, ρόμος 203.  
 χρονικός 642.  
 χρόνος 200.  
 (χρόνος 111.)  
 χρύσειος 713.  
 χρύσειος 611.  
 χρυσίον 204, 654.  
 χρύσιος 713.  
 χρυσοκύμης 645.  
 χρυσοραγές 186.  
 χρυσός 204, 558, 654, 714.  
 χρώμα 182.  
 χρώμα 114, 204.  
 χρώς 114, 182, 204.  
 χυλός 204.  
 χύμα, χυμός 204.  
 χύσις 204.  
 χύτρα 205.
- χῶμα 627.  
 χώννυμι 578.  
 χώομαι 205, 578.  
 χωρίζω 200.  
 χωρίς 200.  
 ψακός 699.  
 ψαλís 699.  
 ψάλλω 730.  
 ψάμβος 307, 696.  
 ψαμμακοσιογάργαρα 174.  
 ψάμμος 307, 696.  
 Ψαπφά 699.  
 ψάρ 355, 704.  
 (ψαρόνι 355.)  
 ψαρός 355.  
 ψατάσθαι, ψατήσαι 704.  
 ψαύω 319.  
 ψάφα 705.  
 ψαφαρός 705.  
 ψάω 319, 702.  
 ψέ 699 (bis).  
 ψείρει 704.  
 ψεκάς 699.  
 ψέλιον 699.  
 ψενδύλοι 699.  
 ψευδής 538.  
 ψεύδομαι 530.  
 ψεύδος 530.  
 ψέφας, ψεφηνός, ψέ-  
 φος, ψεφός 705.  
 ψηλαφάω 730.  
 ψήν 699.  
 ψήχω 319, 702, 710.  
 ψιά 214, 704.  
 ψιάδδω 722.  
 ψιάζω 722.  
 ψιθήν 704.  
 ψίθος 530.
- ψίθυρος 530, 717.  
 ψινάδες 704.  
 ψινάζει 704.  
 ψίττακος 696.  
 ψόα 699, 722.  
 ψόλος 699.  
 ψυγεία 529.  
 ψυδρός 530.  
 ψύη 699, 722.  
 ψυθίζομαι 530.  
 ψύθος 530, 717.  
 ψυθών 530.  
 ψύλλα, ψύλλος 374.  
 ψύττω 285, 699.  
 ψυχή 509, 702.  
 ψύχος 702.  
 ψυχρός 702.  
 ψύχω 509, 529, 530, 702, 710.  
 ψωμίον 613.  
 ψάχω 696.
- ω from F 570 ff.  
 φα 589.  
 ωσται 563.  
 Ώσις 575.  
 ως 586.  
 ωβά 207, 450, 586.  
 ωβρον 391, 577, 586, 609.  
 ώγη 586.  
 ώδυσάμην 244.  
 ώδυσίη 244.  
 ώθέω 260.  
 ώιον 391, 577, 609.  
 ώκίδες 131.  
 ώκνπέτης 210.  
 ώκός 131.  
 ώλαξ 136, 566, 579.  
 ώλέκρανον 374.  
 ώλένη 374, 554.
- Ώλεκος 374.  
 ώλιγγήσιον, ώλιγγιον 371.  
 ώλλών 374.  
 ώλξ 136, 566, 576, 579.  
 ώμοπλάτη 339.  
 ώμός 338.  
 ώμος 339.  
 ώμότης 338.  
 ώνέομαι 322.  
 ώπη, ώνος 322.  
 ώοιοί 563.  
 φόν 391.  
 φπαινε 379.  
 φρα 101, 346, 613.  
 φρα 355, 356.  
 φραϊός 355.  
 φρανος 348, 350, 583.  
 φρασι 355.  
 φρικός 355.  
 φριμος 355.  
 φριος 355.  
 φρογράφοι 355.  
 φρορον 346, 401.  
 φρος 355.  
 φρτο 47, 346.  
 φρυγή 349, 724.  
 φρυγμα 349.  
 φρυθμός 356.  
 φρύω 349, 356, 724.  
 φς 396, 397, 433, 602 f.  
 φσχος 593.  
 φτα 403.  
 φ'τάν 686.  
 φτειλή 737.  
 φχρίας 645.  
 φψ 463.



### III. ITALIAN INDEX.

(Latin not distinguished, Oscan denoted by brackets, Umbrian by an asterisk.)

- |                            |                             |                               |                               |
|----------------------------|-----------------------------|-------------------------------|-------------------------------|
| ā 77, 263.                 | adspiro 305.                | Albunea 292.                  | (an 439.)                     |
| a- (Osk., Umbr. 306).      | adulo 359.                  | albus 187, 292.               | an- 293, 306.                 |
| (aasa 377.)                | adulor 359.                 | alcedo 132.                   | (anafriss 338, 528.)          |
| ab 37, 77, 263, 383.       | adultus 356.                | alces 132.                    | anas 317.                     |
| abdo 254.                  | aduncus 130.                | alea 210.                     | ancus 130, 131.               |
| abdoucit 135.              | advorsum 442.               | alesco 549.                   | *ander 309.                   |
| abs 37, 77, 263, 293, 383. | aedes 250, 425.             | *alfu 292.                    | anfractus 293.                |
| absonus 354.               | aeger 181, 298.             | algor, albus 729.             | angina 190.                   |
| absurdus 354.              | aemidus 245.                | alibi 357.                    | Angitia 190.                  |
| accendo 462.               | aequor 278.                 | alienus 357.                  | ango 190, 191.                |
| acceptor 210.              | Aesculapius 728.            | alimentum 356.                | angor 190, 191, 521.          |
| accipiter 210.             | aesculus 188.               | aliquis 357.                  | anguilla 194.                 |
| acer 131, 215.             | aestas 250.                 | alis 357.                     | anguis 194.                   |
| Achivi 359.                | aestus 250.                 | alius 92, 357, 664, 678, 681. | angulus 131.                  |
| acies 131.                 | aeternus 385.               | (allo 357.)                   | angustus 190, 191.            |
| acrus 131.                 | aevitas 385.                | alo 356.                      | anhelo 306.                   |
| actio 170.                 | aevum 385.                  | Alpes 293.                    | anima 108, 305.               |
| actor 170.                 | af- 77, 263.                | alpus (Sabin.) 272.           | animal 97.                    |
| actus 170.                 | ager 171.                   | alter 357.                    | animus 73, 91, 280, 305.      |
| aculeus 679.               | agilis 170, 172.            | altus 356, 549.               | annulus 293.                  |
| acuo 67, 131.              | agine 171.                  | Alumnia 253.                  | annus 293.                    |
| acupedius 131, 618.        | agine (Marsian) 170.        | alumnus 356.                  | anquiro 306.                  |
| acus 131.                  | agmen 170.                  | alveus 479.                   | anser 200.                    |
| ad 473.                    | agnomen 321.                | am- 293.                      | ante 92, 205.                 |
| adagio 399.                | agnus 391, 591.             | amarus 338.                   | anted 206.                    |
| adagium 399.               | ago 68, 92, 170.            | amatus 739.                   | *antentu 217.                 |
| adbuto 473.                | agonia, agonium 170.        | amb- 293, 306.                | anter (Osk., Umbr.) 309, 310. |
| addo 254.                  | agricola 645.               | ambages 170, 293, 642.        | anterior 205.                 |
| addues 237.                | aidilis 250.                | ambigo 626.                   | antes 206.                    |
| adepts 266.                | *aitu 399.                  | ambiguus 585, 626.            | antiae 205.                   |
| adfatum 201.               | njo 399.                    | ambo 293.                     | antidea 206.                  |
| adluo 368.                 | Ajus Locutius 160.          | ambulo 473.                   | antiquos 205.                 |
| adluvia 368.               | ala 132, 595.               | amentum 511.                  | anus 377.                     |
| admentum 511.              | alacer 360.                 | (amfr 293.)                   | anxius 190, 648.              |
| adminiculum 324.           | (Alafaterna 292, 727, 730.) | amnis 338, 469.               | aper 142.                     |
| adulesco 356, 549.         | Alba (Longa) 292, 293.      | amplector 165.                | apicula 444.                  |
| ador 240, 251.             | Albis 293.                  | amplus 277.                   | apio 510.                     |
| adorea 251.                | albor 187.                  | *ampr, ambr 293.              | Apiola 469.                   |
| adoreus 251.               | albugo 293.                 | amputo 262.                   | apis 264.                     |
| adoriosus 251.             | Albula 292.                 | amsegetes 79.                 | apiscor 33, 35, 510.          |
| adosiosus 251.             |                             | amtermini 79.                 | apor 264.                     |
| adsecla 460.               |                             | amurca 184.                   | Appulus 469.                  |
| adspicio 100.              |                             | amus 739.                     |                               |

- aptus 35, 510.  
 apud 264.  
 aqua 119, 410, 469, 470.  
 aquaticus 234.  
 aquila 502.  
 Aquilo 502.  
 aquilus 502.  
 ar (=ad) 473.  
 ara 377.  
 (aragetom 172.)  
 (aragetud 727.)  
 aranea, araneo, araneum, araneus 341.  
 aratio 341.  
 arator 341.  
 aratrum 341, 431, 501.  
 arbiter 473.  
 arca 132.  
 arceo 132.  
 arcera 132.  
 arcus 374.  
 ardea 345.  
 argentum 172.  
 argilla 172.  
 arguo 172.  
 argutier 172.  
 argutus 172.  
 aries 342, 345.  
 arma 339.  
 armus 339.  
 arna 342.  
 aro 46, 341, 554.  
 arrugia 349.  
 ars 339, 340.  
 articulus 339.  
 artifex 339.  
 artio 339.  
 arto 339.  
 artus (limb) 46, 339.  
 artus (narrow) 339, 340.  
 arvorum 442.  
 arvum, arvus 341.  
 arx 132.  
 asa (OLat., Umbr.) 377.  
 asellus 403.  
 asigna (Sab.) 310.  
 asinus 402.  
 \*asnata 319.  
 aspernor 288.  
 assaratum 398.  
 assir 398.  
 astasint 306.  
 astataries 306.  
 astrum 206.  
 astu, astutus 131.  
 at- 71, 207.  
 atavus 71, 207, 208.  
 atta 207.  
 atticisso 673.  
 au- 77, 263.  
 aububuleus 391.  
 audax 386.  
 audio 31, 386.  
 augeo 64, 187.  
 augmentum 187.  
 augustus 187.  
 aura 387.  
 auris 386, 403.  
 aurora 399, 400, 690.  
 ausculto 403.  
 Auselius 399, 400.  
 Auster 398.  
 austerus 225.  
 auxilium 383.  
 avarus 386.  
 ave 386.  
 aveo 386.  
 avidus 386.  
 avill-a, -us 391, 590.  
 avis 391.  
 avus 386.  
 axamenta 399.  
 axilla 132, 595.  
 axis 383, 431.  
 axo 399.  
 b in the middle of a word from Ital. s 545, from p 280, 363.  
 baculum 61.  
 baeto 473.  
 balatus 291.  
 balbus 290, 555.  
 balbutio 290.  
 balo 291, 702.  
 bassis 139.  
 bellum 457.  
 ben (Osk., Umbr.) 64, 545.  
 bene 357, 712.  
 benignus 712.  
 benust (Osk., Umbr.) 64, 458, 473.  
 beto 473.  
 bi- 239.  
 bibo 280, 431, 465.  
 bibulus 241.  
 biduum 236, 621.  
 bifarium 649.  
 biga 355.  
 bilis 203.  
 bimus 201.  
 bini 239, 483.  
 bis 37, 239, 457, 483.  
 bito 473.  
 bivira 37.  
 Boblicola 280, 465.  
 Bononia 451.  
 bonus 357, 457.  
 boo 477.  
 bos 92, 324, 459, 478.  
 bovinator 477.  
 bovinor 477.  
 bovo 477.  
 brevia 291.  
 brevis 291, 521.  
 brevitat 291.  
 Bruges 416, 438.  
 brutus 475.  
 bubile 584.  
 bubo 291.  
 bubulus 478.  
 bucetum 113.  
 \*buf caleduf 140.  
 bulbatio 291.  
 bulbosus 291.  
 bulbulus 291.  
 bulbus 291.  
 bulla 291, 302.  
 bullatus 291.  
 bullio 291.  
 bullo 291.  
 Burrus 416.  
 C in borrowed words for X 416; before e, i. 485.  
 caballus 442.  
 cachinnus 482.  
 caco 139.  
 Cacus 139.  
 cado 438.  
 caduceus 438.  
 caduceus 438.  
 caecus 40, 168.  
 caedo 247.  
 caednus 505.  
 caelum (chisel) 247.  
 caepa 148.  
 caerimonia 154, 155.  
 calamus 139.  
 calcar 262.  
 calceus 362.  
 calcitro 362.  
 calco 362.  
 calculus 144.  
 calendae 139.  
 calidus 140.  
 caligo 146.  
 callis 146.  
 calo 139.  
 calpar 148.  
 calumnia 140.  
 calvor 140.  
 calvus 82.  
 calx (Ferse) 350, 362.  
 calx (Kiesel) 144.  
 camara 141.  
 camera 141.  
 Campani 149.  
 campestris 234.  
 campus 149.  
 camurus 140, 141.  
 cancer 143.  
 candela 138.  
 candelabrum 300.  
 candeo 138, 462, 522.  
 candidus 138.  
 candor 138.  
 canis 159.  
 cannabis 141.  
 cano 141, 178.  
 canorus 141.  
 cantus 141.  
 capax 141.  
 caper 142.  
 capio 141.  
 capis 141, 637.  
 capitalis 148.  
 Capitodiuum 266.  
 Capitolium 148.  
 capo 153.  
 capra 142.  
 Capua 149.  
 capulum 141.  
 capus 153.  
 caput 148, 445.  
 Cardea 143.  
 cardo 154.  
 careo 148.  
 carina 144.  
 carino 148.  
 carmen 453.  
 Carna 143.  
 carnivorus 477.  
 caro 84, 155.  
 carpo 144.  
 carptim 144.  
 carptor 144.  
 cartilago 144.  
 casa 168.  
 cassis 168, 637.  
 (castrous 168.)  
 castrum 168.  
 \*castruo 168.  
 castus 138, 520.  
 catillus 154.  
 catinus 154.  
 Cato 159.  
 catus 159, 520.  
 caulae 157.  
 caulis 157.  
 caupo 142.  
 caupona 142.  
 cauponor 142.  
 causidicus 134.



- antes 159.  
 autus 100, 152.  
 aveo 100, 152.  
 caverna 145, 160.  
 cavus 157.  
 (cebnust 473.)  
 ce-do 237.  
 cedo 503.  
 celer 146.  
 Celeres 146.  
 celeritas 146.  
 cella 140.  
 cello 149, 362, 490.  
 celo 114, 140, 204,  
 234, 557.  
 celox 146.  
 celsus 139, 153.  
 cena 243.  
 centum 53, 84, 135,  
 442.  
 cepe 148.  
 cera 149.  
 cerdo 155.  
 cerebrum 142, 143.  
 Ceres 154, 155.  
 cerno 110, 156, 712.  
 cernuus 142, 143.  
 \*cersna 243.  
 certo 156.  
 certus 156.  
 cerus 154, 155.  
 cervus 147, 567,  
 586.  
 cesne 243.  
 cete 237.  
 ciccr 144.  
 ciconia 141.  
 cieo 149.  
 cingo 154, 556.  
 cingulum 154.  
 cinis 296.  
 cio 149.  
 circa 158.  
 circum 158.  
 circus 158, 555.  
 cis 309.  
 citus 149.  
 civis 145.  
 clam 60, 271.  
 clamo 140.  
 clamor 140, 356.  
 clangor 53.  
 clarus 329.  
 classicum 139.  
 classis 139.  
 Claudius 352.  
 claudo 150.  
 claustrum 501.  
 Clausus 352.  
 clavis 150, 585,  
 639.  
 clavus 150.  
 clemens 150.  
 clepo 60, 149.  
 cliens 151.  
 clingere 158, 556.  
 clino 150.  
 clitellae 150.  
 Cliternum 150.  
 Clitumnus 150.  
 clivus 150, 156,  
 585.  
 cloaca 151.  
 clueo 151, 324.  
 clunaculum 150, 151.  
 clunis 150, 554.  
 cluo (hear) 151, 554.  
 cluo (purgo) 151.  
 clupeus 539.  
 cluvior 151.  
 co- 392, 544.  
 coalesco 356.  
 coaxo 574.  
 cocles 168.  
 coctilis 224.  
 cognomen 321.  
 cohors 200.  
 coirare 320.  
 collis 153.  
 colo 146, 470.  
 colonus 470.  
 color 114, 204.  
 columna 153, 430.  
 com- 544.  
 commentarius 312.  
 commentum 312.  
 comminiscor 312.  
 communis 324.  
 compes 245.  
 compesco 166, 267.  
 compos 282.  
 comprehendo 97.  
 con- 392, 544, 714.  
 concilium 139.  
 concumbo 529.  
 condicio 134.  
 condo 254.  
 Confinium 544.  
 conflare 231.  
 configo 485.  
 confluges 301, 597.  
 confuto 204, 205.  
 congenualat 179.  
 coniveo 318, 597.  
 conjux 182, 354.  
 conlegium 460.  
 consolor 551.  
 conspicio 100, 168.  
 consternare 706.  
 consuetudo 251.  
 consul 240, 548.  
 consulo 548.  
 contritus 223.  
 contubernium 268.  
 convicium 459, 460.  
 copa 142.  
 copia 510.  
 coquina 465, 466.  
 coquino 477.  
 coquo 465.  
 coquos 465.  
 cor 143, 554.  
 coraverunt 320.  
 coreculum 143.  
 cordatus 143.  
 corium 508.  
 corniculum 210.  
 cornix 153.  
 cornu 18, 147.  
 cornum 147.  
 cornus 147.  
 corona 158.  
 corrugus 349.  
 cortex 148.  
 coruscus 694.  
 corvus 153, 710.  
 cos 159.  
 cossim 154.  
 coxa 154, 709, 710.  
 coxendix 154, 709.  
 cracentes (Old Lat.)  
 153, 555.  
 crapula 680.  
 crassus 144.  
 crastinus 385.  
 crates 144.  
 credo 254.  
 credulam 254.  
 creio 154, 155.  
 creperus 705.  
 crepo 539.  
 crepundiae 539.  
 Crepusci 705.  
 crepusculum 705.  
 cresco 155, 157.  
 cribrum 156.  
 crimen 156.  
 crocito 534.  
 crudelis 156.  
 crudus 156.  
 cruentus 155.  
 cruor 84, 155.  
 crux 151.  
 crusta 156, 157.  
 cubo 529.  
 cuculus 152.  
 culex 374.  
 culina 465.  
 culmen 153.  
 culmus 139.  
 culter 558.  
 cum 392, 449, 544,  
 696, 714.  
 Cumae 145.  
 -cumque 487.  
 cumulus 157.  
 cunctor 708.  
 cuneus 159.  
 cunnus 159.  
 cupa (Falisc.) 529.  
 cupa 159.  
 cupio 115, 195.  
 curis (Sabine) 148.  
 curo 320.  
 curro 60.  
 curtus 148, 291.  
 curvus 158, 505,  
 555.  
 cuspis 637.  
 custos 259, 637.  
 cutis 169, 429.  
 cygnus 706.  
 d for l 266.  
 dacryma 133, 442.  
 danunt 237.  
 dapino 232, 233,  
 680.  
 daps 60, 114, 232,  
 233, 331.  
 (dat 233.)  
 dator 73, 237, 715.  
 daturus 715.  
 de 233.  
 Deana 516.  
 decem 92, 134.  
 decerno 156.  
 decet 61, 134.  
 declino 150.  
 decorus 400.  
 decus 61, 134, 400.  
 \*dependul 134.  
 defendo 255.  
 defluo 326.  
 defruo 494.  
 defrutum 494, 531.  
 degunere 177.  
 (deivai 514.)  
 delectus 363.  
 delibutus 365, 366.  
 delinio 460.  
 dens 244.  
 denseo, denso 233.  
 densus 233.  
 denuo 315.  
 depso 64.  
 depuvo 268.  
 descendo 166.  
 descisco 110, 145.  
 deterior 223.  
 detudes 227.  
 deus 78, 236, 513 ff.  
 devoro 477.  
 dexter 235, 430.  
 dextimus 235.  
 di- 37.  
 Diana 236.  
 dicio 134.

- dicis 134.  
 dico 115, 134, 182.  
 dictator 134.  
 dies 236, 573, 588, 619.  
 differo 106, 300.  
 digitus 75, 114, 133.  
 dignus 134.  
 diligens 363.  
 diluculum 160.  
 diluo 368.  
 diluvium 368.  
 dimidius 332.  
 lingua 194.  
 Diouis 236, 616.  
 dirus 235.  
 dis- 37, 239.  
 disco 230.  
 discrimen 156.  
 dispesco 267.  
 distinguo 215.  
 distuli 106.  
 diu 572, 621.  
 (*Διούφ-ει* 616.)  
 Dius fidius 261.  
 diutinus 318, 385, 715.  
 divido 150, 242.  
 divus 236, 516, 616.  
 -do 233.  
 do 237, 391.  
 doceo 114, 230.  
 doctus 230.  
 dolabra 232.  
 dolium 232.  
 dolo 232.  
 (dolud 237.)  
 dolus 237.  
 domesticus 234.  
 domicilium 140, 234.  
 dominus 232.  
 Domitius 234.  
 domitor 232.  
 domitus 232.  
 domo 65, 232.  
 domus 234.  
 donum 237, 439.  
 dormio 233.  
 dorsum 235.  
 dorsum (down-wards) 235.  
 dorsus 235.  
 dos 73, 237, 391, 644.  
 dubius 239.  
 ducenti 135.  
 duco 135, 171, 182.  
 dudum 573, 621.  
 duellum 457.  
 duint, duam 237.  
 dūitor 237.  
 dulcedo 358.  
 dulcesco 358.  
 dulcis 358, 492.  
 dum 687.  
 dumetum 233.  
 dumus 233.  
 duo 37, 239.  
 duonus 457.  
 duplex 165, 239.  
 \*dupursus 245.  
 \*dur 239.  
 dusmus 233.  
 dux 135.  
 ē 77, 383, 435.  
 ec- 77, 383, 435.  
 ecfatus 383.  
 ecfato 383.  
 ecfutio 204, 205.  
 edax 240.  
 ēdo 46, 240.  
 ēdo 254.  
 effingo 182.  
 effutio s. ecfutio.  
 egenus 191.  
 egeo 191.  
 ego 91, 93, 307, 525.  
 egregius 174.  
 \*ehe, eh 383, 550.  
 (ehtrad 383.)  
 \*ehvelkiu 550.  
 \*ehveltu 550.  
 elegans 363.  
 elementum 356, 357, 451.  
 elogium 359.  
 eluctari 183.  
 \*emantur 323.  
 emem 543.  
 emendo 77.  
 emo 142, 323, 614.  
 emolumentum 337.  
 \*en- 309.  
 endo 233, 234, 309.  
 eneco 77.  
 eo 254, 401.  
 Epidius 462.  
 Epona 462, 469.  
 equa 462.  
 eques 462.  
 equito 462.  
 equus 25, 457, 462.  
 ēr 200.  
 era 120, 199.  
 eredes 684.  
 erigo 185.  
 erinaceus 200.  
 erro 556.  
 error 556.  
 erugo 181, 182.  
 erus 199.  
 ervilia 343.  
 ervum 343, 585, 729.  
 esa 120, 199.  
 esca 73, 240, 249.  
 Esquiliae 470.  
 esurio 240.  
 esus 240.  
 et 71, 207, 208.  
 etiam 207, 208.  
 etiamnum 318.  
 ex 34, 77, 289, 293, 383, 384, 435.  
 examen 171.  
 exardesco 231.  
 exbures 280.  
 excello 139, 153.  
 excito 149.  
 excludo 150.  
 excrementum 156.  
 exemplum 370.  
 exigo 171.  
 exiguus 171, 332.  
 experior 272.  
 explenunt 277.  
 Exquiliae 470.  
 exsternare 706.  
 extrabunt 222.  
 extrico 468.  
 extro 222.  
 exurgeo 181.  
 F Italian 447, 494; Lat. for gh 482; different from φ 416; from Ital. s 545.  
 (faama 254.)  
 (faamat 254, 255.)  
 faba 297.  
 fabula 296.  
 facetus 296, 297.  
 facies 296, 297.  
 facilis 323.  
 facinus 304, 730.  
 facio 62, 109, 254, 677.  
 \*faciu 254.  
 facultas 323.  
 fagineus 188.  
 faginus 188.  
 fagus 188.  
 fagutalis 188.  
 \*fakust 254.  
 falco 169.  
 falcones 169.  
 fallo 373.  
 falsus 520.  
 falx 169.  
 fama 296.  
 (famel 254.)  
 fames 201, 297.  
 familia 254.  
 famulus 203, 254.  
 far 299, 300.  
 farcimen 302.  
 farcio 115, 302, 674.  
 fari 296.  
 farina 299, 300.  
 fariolus 203.  
 fartilis 302.  
 fartor 302.  
 fas 296, 300.  
 fascino 531.  
 fassio 139.  
 fastidium 256.  
 fastigium 722.  
 fastus 256.  
 fateor 296.  
 fatigo 201.  
 fatisco 201.  
 fatum 296.  
 faustus 297.  
 faveo 297.  
 favilla 259, 296.  
 favus 259, 600.  
 fax 297.  
 febris 298.  
 Februlis 303.  
 februo 303.  
 februs 303.  
 fecundus 252, 301, 304.  
 (fefacust 254.)  
 (fefidus 183.)  
 fel 203, 482.  
 \*feliu 252, 253.  
 fellitus 203.  
 felo 252.  
 femina 252, 253, 430.  
 fendo 255, 299.  
 fenum 304.  
 fenus 187, 252, 304.  
 -fer 299.  
 fera 256.  
 ferax 299.  
 ferbui 226, 443, 584.  
 ferculum 299.  
 feriae 520.  
 ferio 256, 298.  
 ferme 257.  
 fero 34, 98, 106, 235, 299, 300, 554.  
 ferox 256.  
 fertilis 299.  
 ferus 256, 484.  
 ferveo 298, 303, 494, 531.  
 fervo 494.  
 fessus 201.  
 festivus 361.  
 festum 520.



- festus 520.  
 fetus 252, 304.  
 fiber 304.  
 fibra 300.  
 fictilis 182.  
 fictor 182.  
 fidelia 261.  
 fides (strings) 247,  
 700.  
 fides 261.  
 fidicen 247.  
 fidicina 247.  
 fidiculae 247.  
 Fidius 261.  
 fido 261.  
 fidus 261.  
 figo 183, 187.  
 figulus 182.  
 figura 182.  
 filia, filius 252, 253,  
 258.  
 finus 259.  
 fingo 107, 182.  
 fio 254.  
 fircus (Sabine) 132,  
 483.  
 firmus 257, 532.  
 flabrum 300.  
 flagellum 278.  
 (flagitii 188.)  
 flagro 188, 449.  
 flagrum 485.  
 flamen (priest) 188.  
 flamen (a blowing)  
 300.  
 flamma 188.  
 flatus 300.  
 flavus 188, 202,  
 739.  
 flecto 169, 677.  
 flemina 301.  
 fleo 252, 301, 304.  
 fletus 301.  
 flo 300.  
 Flora 300.  
 Florentia 251.  
 floreo 300.  
 flos 300, 301.  
 fluctuo 301.  
 fluctus 301.  
 fluito 301.  
 flumen 301.  
 fluo 301, 597.  
 (Fluusal 300.)  
 fluvius 301.  
 fluxus 301.  
 fodio 464.  
 foedus 261.  
 foeteo 259.  
 foederatei 261.  
 folium 305.  
 follis 496.  
 folus 202.  
 fons 204, 205, 303.  
 foramen 298.  
 foras 258, 717.  
 forbea 300, 438.  
 forceps 494.  
 forctis 257.  
 foretum 257.  
 fordus 299.  
 fore 304, 717.  
 fores 258.  
 forfex 298.  
 foris 258.  
 forma 257.  
 formica 337, 338,  
 449, 700.  
 formidus 493, 494.  
 formucapes 494.  
 formus 493, 494.  
 fornax 493.  
 fornus 493.  
 foro 298.  
 forpex 494.  
 fors 299, 300.  
 fortis 257.  
 (fortis 300.)  
 fortuitus 299.  
 fortuna 299, 300.  
 forum 298.  
 fostis 494.  
 frango 542.  
 frater 303.  
 fraternus 303.  
 \*fratreks 303.  
 fratria 303.  
 fraus 223, 637.  
 fremitus 530.  
 fremo 530.  
 fremor 530.  
 frendo 203, 221.  
 frenum 257.  
 frequens 115, 302.  
 fretum 531.  
 fetus 257.  
 fricae 204.  
 frico 204.  
 frigeo 351.  
 frigescio 351.  
 frigidus 351.  
 frigo 188, 351.  
 frigus 351.  
 frio 204, 482.  
 frons (brow) 295.  
 fructus 597.  
 fruges 597.  
 frugi 597.  
 frumen 186.  
 fruor 187, 597.  
 frustra 223.  
 frustrum 223.  
 fuam, fuat, fuet  
 254, 304.  
 fucus 382.  
 (fufans 304.)  
 fuga 189.  
 fugax 189.  
 fugio 189, 492, 620.  
 fugitivus 189.  
 fugo 189.  
 fui 105, 304, 376.  
 \*fuio, fuia 304.  
 fulgeo 33, 188, 449.  
 fulgur 188.  
 fulmen 188.  
 Fulvia 304.  
 fulvus 188, 739.  
 fumus 60, 115, 258.  
 funambulus 473.  
 funda 205, 247.  
 fundo 98, 204, 205.  
 fundus 262.  
 fungus 380.  
 funus 259.  
 fur 108, 299.  
 furca 298.  
 furnus 493.  
 furvus 303, 304.  
 fuscus 304.  
 fusus 247.  
 futavit 304.  
 futillis 204, 205,  
 252, 420.  
 futis 204.  
 futo 304.  
 (Futref 305.)  
 futtilis 205, 252.  
 futuo 285, 304, 717.  
 futurus 304.  
 g from c 135, 164,  
 280.  
 Gabii 174.  
 gallus 178.  
 garrio 177, 178.  
 garrulus 177.  
 gau 172.  
 gaudeo 64, 172.  
 gaudium 172, 673.  
 gavisus 172.  
 gelu 173.  
 gemini 547.  
 gena 109, 307, 525.  
 gener 175, 546, 547.  
 genetrix 175, 639.  
 geniculatus 179.  
 geniculum 179.  
 genitor 73, 175,  
 547.  
 genius 175.  
 gens 73, 175.  
 genu 179.  
 Genua 180, 569.  
 Genucius 179.  
 genuinus 308.  
 genus 73, 74, 175,  
 234, 547.  
 germen 479.  
 gero 98, 476.  
 gerō(n) 476.  
 gestamen 476.  
 gesto 476.  
 gestus 476.  
 gigno 175.  
 gilvus 202, 203.  
 glaber 56, 178.  
 glabresco 178.  
 Glabrio 178.  
 glabro 178.  
 glacies 173.  
 glamae 552.  
 glans 474.  
 glis (humus tenax)  
 367.  
 glis (dormouse)  
 478.  
 gliscerae 656.  
 glisco 656.  
 glittus 367.  
 glocio 151, 620.  
 gloria 151.  
 glos 173.  
 glubo 56, 178, 703.  
 gluma 178.  
 glus 367.  
 gluten, glutinum  
 367.  
 glutio 358, 478.  
 gnarigo 178.  
 gnarus 178, 179.  
 gnascor 175.  
 gnauus 179.  
 gnosco 92, 178, 179,  
 321.  
 gnotio 75.  
 gracilis 153.  
 gradior 703.  
 gramen 478.  
 gramia, gramiosus  
 552.  
 grandinat 197.  
 grando 197, 555.  
 granum 114, 176,  
 223.  
 gratia 198, 199.  
 gratus 198.  
 gravedo 475.  
 gravidus 475.  
 gravis 475.  
 gravitas 475.  
 gravo 475.  
 gregatim 174.  
 gremium 479.  
 grex 174, 714.  
 groma 705.  
 gruo 175.  
 grus 175.

- gula 478.  
 gurgus 478.  
 gurgulio 478.  
 gusto 177.  
 gustulus 177.  
 gustus 177.  
 gutta 205.  
 guttur 205.  
  
 h 684; pronuncia-  
 tion 416.  
 habeo 442.  
 haedus 202.  
 hamus 198, 739.  
 hara 200.  
 hariolus 203.  
 haruspex 203, 556.  
 hasta 196.  
 hedera 196.  
 helus 202, 357, 555.  
 helvola 202.  
 helvus 202.  
 hemones 197, 198.  
 her 200.  
 hera 120.  
 herba 277, 300.  
 herbilis hanser 200.  
 hereditas 199.  
 (Herentatei 198.)  
 heres 199, 200, 637.  
 (herest 198.)  
 heri 201.  
 \*heriest 198.  
 (heriad 198.)  
 herinaceus 200.  
 hernia 203.  
 hesternus 201.  
 hiatus 196.  
 hibernus 201.  
 hie 543.  
 hiema 201, 544.  
 hilla 203.  
 hinsidia 684.  
 hio 196.  
 hir 199.  
 hira 203, 556.  
 hircus 132, 483.  
 hirpus (Sab.) 161.  
 hirundo 199.  
 hirundo 199, 555.  
 hisco 196.  
 holus 202, 555.  
 homo 197.  
 homones 197.  
 homunculus 392.  
 hortum 257.  
 hordeum 156, 351.  
 hornus 355, 356.  
 horreo 483, 712.  
 hortus 200.  
 hostis 494.  
 humerus s. umerus.
- humi 197.  
 humilis 197, 254,  
 715.  
 humo 197.  
 humor s. umor.  
 humum 197.  
 humus 197, 254.  
  
 i- 306.  
 ibi 687.  
 ico 115, 461.  
 ictus 461.  
 id 396, 543.  
 ignis 679.  
 ignominia 321.  
 ignoro 178.  
 illico 212, 245.  
 im 396.  
 imber 338, 528.  
 imbibo 280.  
 imbito 473.  
 imbuo 280.  
 immanis 328.  
 impedio 245.  
 impetus 210, 606.  
 impleo 277.  
 impos 282.  
 in 309.  
 in- 306, 439.  
 incanto 477.  
 inciens 151, 157,  
 158.  
 incito 149.  
 inclino 150.  
 inclutus 151.  
 incolu 470.  
 incrementum 357.  
 incumbo 529.  
 indagare 170.  
 indago 170.  
 indico 134.  
 indigeo 191.  
 indigitamenta 399.  
 indu 233, 234, 309,  
 310.  
 infensus 255.  
 infestus 255.  
 inficio 186.  
 ingluvis 478.  
 injuria 151.  
 inlustris 161.  
 inops 510.  
 inquilinus 470.  
 inrignus 191.  
 inrito 340.  
 insece 467, 468.  
 insectiones 467, 468.  
 insequis 468.  
 insexit 467.  
 instauro 212.  
 instigo 215.  
 instinctus 215.
- insubidus 380.  
 intellego 363.  
 inter 293, 309.  
 Interamna 469.  
 intercalaris 139.  
 interdiu 236, 572.  
 intereo 309.  
 interior 309.  
 interpres 673.  
 intestinus 309.  
 intra 309.  
 intrare 222.  
 intrico 468.  
 intrō 309.  
 intumus 309, 445.  
 intus 309.  
 invenio 211.  
 invito 460.  
 ir 199.  
 irpus (Sab.) 161.  
 is 396, 397, 543.  
 ispirito (Late L.) 720.  
 istatuam (Late L.)  
 720.  
 istega (Late L.) 186.  
 Isticho (Late L.)  
 720.  
 Italia 208.  
 iter 401.  
 itio 401.  
 itus 401.  
  
 jaceo 452.  
 jacio 62, 254, 401,  
 462, 677.  
 jacto 372.  
 janitricis 308, 611.  
 jecur 27, 72, 461.  
 Jovis 616.  
 judex 134, 322.  
 jugerum 182.  
 jugulum 182.  
 jugum 54, 182,  
 626, 677.  
 jujubae 626.  
 jumentum 182.  
 jungo 54, 182, 677.  
 junix 153, 588.  
 \*Jupater 616, 617.  
 Juppiter 269, 616.  
 jus (right) 151, 300.  
 jus (broth) 626.  
 (Juvei flagitū 188.)  
 juvenea 153, 588  
 (bis).  
 juveneus 588, 602.  
 juvenis 231, 588  
 (bis).  
 juvenix 588.  
 juxta 182.  
  
 \*kapir 141.
- (Kapva 149.)  
 (kevs 145.)  
 (kum-bened 473-)  
  
 l for d 133, 241  
 244, 442.  
 labea 363.  
 labecula 369.  
 Labeo 363.  
 labes (Fleck) 369.  
 labes (Fall) 369.  
 labium 363.  
 labo 369.  
 labor 292.  
 labor 369.  
 laboriosus 292.  
 laboro 272, 292.  
 labos 292.  
 labrum 363.  
 lac 172.  
 lacer 160, 542.  
 lacerna 160, 542.  
 lacero 133, 160.  
 lacinia 160, 542.  
 lacio 137, 365.  
 lacruma 75, 133  
 442, 444.  
 lacte 172.  
 lactes 183.  
 lacuna 160.  
 laeus 160.  
 Laeca 361.  
 laevus 361, 600.  
 lama 160.  
 lambo 363, 554.  
 lamella 451.  
 lamina 724.  
 lana 344.  
 languet 183.  
 languidus 183.  
 languor 183.  
 lanterna 265.  
 lanx 165, 278.  
 lapis 637.  
 laqueus 137, 587.  
 lascivus 361.  
 latebra 545.  
 lateo 420.  
 later 278.  
 laterna 265.  
 Latium 278.  
 latro (bark) 657.  
 latro (robber) 363.  
 latus (broad) 216,  
 278.  
 latus (part. pass.)  
 216, 354.  
 latus (sid.) 271, 278.  
 laus 637.  
 lautus 368.  
 lavacrum 431.  
 Laverna 363.



- laverniones 363.  
 lavo 42, 114, 368, 369, 569.  
 lax 365.  
 laxo 183.  
 laxis 183.  
 lectica 194, 294.  
 lectio 363.  
 lector 363.  
 lectus (bed) 194.  
 lectus (chosen) 363.  
 legio 363, 739.  
 lego 91, 363, 364.  
 legulus 363.  
 legumen 363, 364.  
 lendes 243.  
 lenio 460.  
 lenis 113.  
 lentus 113.  
 leo 366.  
 lepidus 265.  
 lepor 265.  
 leptis 266.  
 lepus 265.  
 Leucesius 160, 161.  
 levigo 365.  
 levir 231.  
 lēvis, lēvitas 192, 291, 475.  
 lēvis 365.  
 lēvitas 365.  
 lēvo 192.  
 lēvo 365.  
 lex 364.  
 libatio 365.  
 liber 178, 539.  
 liber 367, 368, 496, 497.  
 Liber 365.  
 libertas 496.  
 libet 367, 368, 373, 718.  
 libido 367, 653.  
 Libitina 368.  
 libo 365.  
 liceor 462.  
 licet 462.  
 licia 366.  
 Licinius 365.  
 licinus 365.  
 lictor 183, 184.  
 lien 288.  
 lignum 364.  
 ligo (bind) 183, 718. (ligud 364.)  
 ligurio 194.  
 (likitud 462.)  
 limen 365.  
 limes 365.  
 limpidus 265.  
 limus (crooked) 365.  
 linea 366.  
 lineus 366.  
 lingo 194, 425.  
 lingua 194.  
 lino 366, 724.  
 linquier 365.  
 linquo 462.  
 linter 279.  
 linteus 366.  
 linum 366.  
 lippus 266.  
 liqueo 266, 463.  
 liquidus 463.  
 liquor 463.  
 litus 366.  
 litus 366, 444.  
 liveo 271, 370.  
 lividus 271, 367, 370.  
 livor 271, 370.  
 lixula 365.  
 locus 212.  
 Locutius 160.  
 loebesum 368, 496. (loferta.Falisk.368.)  
 longinquus 183.  
 longitudo 183.  
 longus 183, 192.  
 loquax 160.  
 loquela 160.  
 loquor 160, 458, 554.  
 lorum 568.  
 lotium 369.  
 (loufro 367.)  
 Lua 368.  
 lubet 367, 373, 718.  
 lubricus 367, 718.  
 luceo 113, 160, 449.  
 lucidus 160.  
 lucrum 363.  
 lucta 183.  
 luctus 183.  
 luculentus 265.  
 lucuns 365.  
 lucus 113.  
 ludicrus 501.  
 lues 368.  
 lugeo 183.  
 lugubris 183.  
 lumen 77, 113, 160, 161.  
 luna 77, 160, 161, 400.  
 lunter 279.  
 luo 42, 114, 368.  
 lupus 78, 161, 377, 468, 568, 714.  
 luridus 202.  
 lusciniolus 449.  
 lustrum 368, 369.  
 lūteus 202, 204.  
 lutor 368.  
 lūtum 368.  
 lūtum 202, 204. (lūtfreis 368, 496.)  
 lux 113, 160.  
 luxo 365.  
 luxus (sprained) 183, 184, 365.  
 macer 693.  
 maceria 326.  
 macero 326.  
 macte 372.  
 macto (slaughter) 327.  
 madefacio 326.  
 madeo 326.  
 madesco 326.  
 madidus 326.  
 madius (Mid. Lat.) 624.  
 maestus 594.  
 magis 282, 328.  
 magister 328, 335.  
 magistratus 328.  
 Magius 328.  
 magnus 328.  
 (Mahiis 328.)  
 major 328, 399.  
 mala 326.  
 maleficus 370.  
 malignus 370.  
 malitia 370.  
 maltas 326.  
 malus 370.  
 mamma 333.  
 mancipium 199.  
 mancus 335.  
 mānē 328.  
 maneo 103, 312.  
 Manes 328.  
 manifestus 255. (manim 328.)  
 mano 326.  
 mānus 328, 333.  
 mānus 328.  
 mappa 449.  
 marceo 331, 332, 555.  
 marcesco 331.  
 marcidus 331.  
 Marcipor 287.  
 mare 332, 469.  
 maredus 326.  
 margo 184.  
 marmor 567.  
 mas 103, 313.  
 massa 673.  
 matella 323.  
 mater 333, 639.  
 matercula 639.  
 materies 328.  
 matula 323.  
 matus 326.  
 maxilla 326.  
 maximus 328.  
 me 327.  
 medela 243.  
 medeor 243, 312.  
 medicus 243, 312.  
 meditor 243, 312.  
 medius 92, 93, 332, 590.  
 (mefiai, mefiu 332, 447.)  
 \*mehe 327.  
 mejo 195, 399.  
 mel 203, 330.  
 melius 594.  
 membrum 595.  
 memini 103, 312.  
 memor 103, 110, 330.  
 memoria 330.  
 memoro 330.  
 mena 333, 400.  
 mencla 336.  
 menda 335.  
 mendax 312, 313.  
 mendicus 335.  
 Menervai 313.  
 mens 103, 312.  
 mensa 327.  
 mensis 333.  
 menstruus 333.  
 mensura 327.  
 mentio 312.  
 mentior 312, 313.  
 mentula 336.  
 meo 324.  
 merces 199, 331, 637.  
 merenda 331.  
 mereo, mereor 65, 331.  
 meretrix 331.  
 mergae 184, 555.  
 merges 184.  
 meridies 332.  
 merx 331.  
 mesene (Sabell.) 333.  
 messis 209, 323.  
 messor 323.  
 meta 324.  
 metior 243, 327.  
 meto 323, 327.  
 metor 327.  
 metuo 285.  
 meus 327, 635.  
 mica 693.  
 micidus 693.  
 mictus 195.  
 micula 693.  
 mihi 358.  
 milium 595.

- Minerva 312, 313.  
 mingo 195.  
 minimus 334.  
 minister 334, 335.  
 minor 334.  
 (minstreis 334, 335.)  
 mintrio 335.  
 Minucius 334.  
 minno 334.  
 minurrio 335.  
 minus 334, 335.  
 minutus 334.  
 miror 329.  
 mirus 328, 329, 656.  
 miscellaneous 334.  
 miscellus 334.  
 misceo 334, 431, 444.  
 miser 594.  
 mistio, mixtio 334.  
 mistura, mixtura 334.  
 mistus, mixtus 334.  
 modior 62, 243.  
 modestus 234, 243.  
 modius 62, 243.  
 modus 62, 243.  
 moenia 324.  
 moiros 324.  
 mola 114, 337.  
 molaris 337.  
 molendinum 337.  
 molitor 337.  
 mollis 326.  
 mollis 326, 599.  
 mollities 326.  
 molo 337, 591, 714.  
 momar 338.  
 momentum 324.  
 moneo 103, 312.  
 Moneta 312.  
 mons 302.  
 monstrum 312, 369.  
 mora 103, 110, 330, 331.  
 morbus 277, 331, 332.  
 mordeo 243, 326, 693.  
 morio 338.  
 morior 114, 331.  
 mörör 103, 331.  
 mörör 338.  
 morosus 338.  
 mors 331.  
 mortalis 331.  
 mortuus 324, 331.  
 morus 338.  
 mos 328.  
 motacilla 146.  
 motus 324.  
 moveo 324.  
 mucedo 162.  
 muceo 162.  
 mucor 162.  
 muero 546.  
 mucus 162.  
 mugil 162.  
 mugio 349.  
 (mufnskü 324.)  
 mulceo 463.  
 mulco 463.  
 muletra, muletrum 184.  
 muletus 184.  
 mulgeo 184, 555.  
 mulier 187, 326.  
 mulsus 330.  
 mungo 162, 165.  
 munio 302, 324.  
 murmur 336.  
 murmuro 336.  
 murus 324.  
 mus 338.  
 musca 336.  
 muscerda 168.  
 muscipula 338.  
 musculus 338.  
 mussito 336.  
 musso 336.  
 mutilus 717.  
 mutio 336.  
 muto 324.  
 mutus 336.  
 mutuus 324.  
 nactus 308.  
 nae 317.  
 nanciscor 308.  
 nactus 308, 309.  
 \*Nar 319.  
 nare 319.  
 narro 178.  
 Nasica 361.  
 nasus 353.  
 nates 320.  
 nato 319.  
 natrix 319.  
 natura 175.  
 nausea 313.  
 nauta 313.  
 navigium 313.  
 navigo 313.  
 navis 313.  
 navita 313.  
 nayo 179.  
 ne 317, 333.  
 -ne 318.  
 ne- 317.  
 nebrundines 316.  
 nebula 294.  
 necesse 309.  
 neco 162.  
 necto 677.  
 nefas 317.  
 nefrundines 316.  
 neglego 363, 364, 444.  
 nego 399.  
 (neip 487.)  
 nemen 316.  
 nemus 313, 314.  
 neo 316.  
 nepos 266, 537.  
 neptis 266.  
 \*ner (acc. pl. nerf) 307.  
 nerio (Sabin.) 307.  
 nero (Sabin.) 307.  
 \*nertru mani 309.  
 \*nerum 307.  
 nerviae 316.  
 nervosus 316.  
 nervus 176, 270, 316, 346, 389, 568, 586, 692.  
 \*nesimum 308, 309.  
 netus 316.  
 nex 162.  
 ni- 317.  
 Nicepor 416.  
 nico 597.  
 nidus 315.  
 niger 370.  
 nimbus 294.  
 nimirum 317, 328.  
 nimis 327.  
 ningit 318, 692.  
 ninguis 318, 482.  
 ninguit 318, 482.  
 ningulus 392.  
 nisi 317.  
 (Niumsleis 314, 339.)  
 nix 318.  
 nobis 320.  
 noceo 162.  
 noctis 163.  
 noctu 163.  
 noctua 163.  
 nocturnus 163.  
 noenu, noenum 317.  
 nomen 321.  
 nomenclator 139.  
 nomino 321.  
 non 317.  
 nonaginta 310, 311.  
 nongenti 310.  
 nonus 310.  
 norma 179.  
 nos 320, 544.  
 notio 178.  
 notus 178.  
 nountius 315.  
 novalis 315.  
 novellus 315.  
 novem 77, 310.  
 noverca 315.  
 novicius 315, 647.  
 noviens 310.  
 novissimus 316.  
 Novius 315.  
 novo 315.  
 novus 315.  
 nox 163, 644, 714.  
 noxa 162.  
 nubes 294, 425.  
 nubilus 294.  
 nubo 294.  
 Nuceria 292, 315.  
 nudius 236, 318.  
 num 318.  
 Numa 313.  
 \*nume, nome 321.  
 numen 318.  
 Numerius 313.  
 numerus 313, 314, 339, 489.  
 Numitor 313, 314.  
 nummus 314.  
 nunc 318.  
 nuncupo 321.  
 nundinae 236.  
 nuntius 315.  
 nuo 318.  
 nuper 315.  
 nurus 33, 319, 692.  
 nutrix 319.  
 nutus 318.  
 (Návla 315.)  
 ob 79, 264.  
 obauro 264.  
 obdo 264.  
 oboe 264.  
 obliquus 365.  
 oboedio 264.  
 obscurus 169.  
 observeo 551.  
 obtusus 153, 227.  
 obviam 264.  
 oculo 60, 114, 140, 204, 529.  
 ocior 131.  
 ociter 131.  
 ocquoltod 140.  
 Oericulum 131.  
 oeris 131.  
 octavus 163, 537.  
 octo 92, 163.  
 oculus 40, 55, 101, 463.  
 odi 260.  
 odor 46, 93, 244.  
 odoror 244.  
 offendimentum 261.  
 offendix 261.  
 offendo 255.



- cinos 320.  
 \*okri 131.  
 oleo 244.  
 olesco 357.  
 oleum 359.  
 olfacio 244.  
 olim 271.  
 oliva 359, 566.  
 olus 202, 357.  
 omnis 293.  
 oncia 320.  
 \*onse 339.  
 operor 68.  
 opes 510.  
 opimus 510.  
 opiparus 270.  
 oportet 282.  
 oppedum 245.  
 oppido 245.  
 oppidum 79, 245.  
 opportunus 264.  
 opprobrium 300.  
 ops 510.  
 optumus 445.  
 opulentus 510.  
 opus 35, 67, 118, 276.  
 oraculum 432.  
 orbifico 294.  
 orbitas 294.  
 orbitudo 294.  
 orbo 294, 295.  
 Orbona 294.  
 orbus 294.  
 ordo 8.  
 Orfius 295.  
 origo 346.  
 orior 46, 346.  
 ortus 346.  
 ōs (bone) 41, 209.  
 ōs (mouth) 375, 376.  
 osseus 209.  
 ossu, ossum 209.  
 ovatus 388.  
 ovilis 390.  
 ovillus 390.  
 ovis (Lat., Umbr.) 52, 92, 390.  
 ovo 388.  
 ovum 391.  
  
 p for k 377, 464, 468, 472; p in rowed words = φ 416.  
 pabulum 270.  
 pacio 267.  
 paciscor 267, 534.  
 pactio 267.  
 paenitet 281.  
 pago 267.  
 palam 271.  
 palea 288.  
 Pales 270.  
 palleo 271.  
 pallidus 271.  
 palma 268.  
 palmus 268.  
 palpo 730.  
 palumba 271.  
 pālus 267, 535.  
 palus 248, 275.  
 palustris 275.  
 pampinus 511.  
 pando 211.  
 pango 267, 534, 654.  
 panis 270.  
 pannus 275, 276.  
 pannuvellum 275, 276.  
 \*panta 466, 467.  
 panus 275, 276.  
 papilla 511.  
 papula 511.  
 Parca 166.  
 parco 270.  
 parcus 270.  
 parentes 282.  
 pario 270, 282.  
 paro 270, 281.  
 pars 281.  
 parum 270.  
 parumper 269, 392.  
 parus 355.  
 parvus 270, 346, 568.  
 pasco 270, 540.  
 pastor 270.  
 pateo 211.  
 pater 269, 440.  
 patina 211.  
 patior 420, 701.  
 patrius 270, 636.  
 patruus 270.  
 Patulcius 211.  
 patulus 211.  
 paucus 270.  
 paulisper 269, 392.  
 paulus 270.  
 pauper 270.  
 pavimentum 268.  
 pavo 268.  
 pavo 495.  
 pax 261, 267.  
 paxillus 535.  
 \*pe 467, 487.  
 pecco 164.  
 pecten 164, 677.  
 pecto 164, 677.  
 pectus 366.  
 pecu 268, 637.  
 pecus 637.  
 peda 245.  
 pedes 245.  
 pedester 245.  
 pedica 245.  
 pedico 246.  
 pedissequa 460.  
 pēdo 77, 246, 285.  
 pēdo 245.  
 pēdor 246.  
 pedule 245.  
 Pedum 79, 114, 245.  
 pedum 79, 245.  
 \*pei 467, 487.  
 pējero 77.  
 peior 164.  
 pellicio 365.  
 pellinus 271.  
 pellis 271.  
 pello 268.  
 peluis 271.  
 pelvis 271, 639.  
 penates 270.  
 pendeo 247, 462.  
 pendo 462.  
 penes 270.  
 penetro 270.  
 penis 272, 694.  
 penna 210.  
 penuria 271, 272.  
 penus 270, 304.  
 per 268, 269.  
 per- 274.  
 \*per 284.  
 perbito 269.  
 percello 146.  
 percipio 269.  
 perdix 455.  
 peregre 273.  
 peregrinus 449.  
 perendie 273.  
 pereo 269.  
 Perficus 155.  
 perhibeo 269.  
 periculum 272.  
 peritus 272.  
 perjurium 269, 273.  
 perjuro 77.  
 permagnus 274.  
 \*pernaio 284.  
 \*perne 284.  
 perperam 271, 273, 649.  
 perplovo 279.  
 perstringo 380.  
 (pert 273.)  
 Pertunda 227.  
 (perum 268, 269.)  
 perverso 269.  
 pervicax 107.  
 pes 245.  
 pesna 210.  
 pessulus 535.  
 pessum 245.  
 pestis 245.  
 peto 106, 210, 606.  
 (petora 488.)  
 Petrejus 465, 635.  
 petrones 198.  
 \*petur 488.  
 pica 168.  
 pictor 164.  
 pictura 164.  
 picus 168.  
 (-pid 27, 467, 487, 489.)  
 piget 164.  
 pignus 267.  
 Pilemo 416.  
 pilles 276.  
 pilum 193, 277.  
 pilumnus 277.  
 pilus 276.  
 pingo 32, 164, 165, 183.  
 pinguis 276, 521.  
 pinsio 498.  
 pinso 277, 498.  
 pinus 164.  
 \*pir 286, 287.  
 pis, pid (Osk., Umbr.) 489.  
 piso 277.  
 Piso 276.  
 pistor 277, 498.  
 pisum 276.  
 (pitpit 489.)  
 pituita 280, 285.  
 pix 164.  
 plāga 166.  
 plāga 277.  
 planca 165.  
 planctus 277.  
 plancus 165.  
 plango 277.  
 plangor 277.  
 planta (sole) 278.  
 planus 165, 278.  
 plebejus 635.  
 plebes, plebs 73, 226, 277.  
 plebiscitum 109.  
 plecto (plait) 165, 677.  
 plecto (punish) 277.  
 plenus 277.  
 pleo 226, 554.  
 pleores 281.  
 plerique 281.  
 plico 165, 392.  
 plisima 281.  
 ploirume 281.  
 ploro 279.  
 plous 281.  
 plousima 281.

- pluit 279.  
 pluma 279.  
 plumbeus 370.  
 plumbum 370, 585.  
 plurimus 281.  
 plus 9, 281.  
 pluvia 226, 279.  
 poculum 280, 430.  
 podex 246.  
 poena 281, 472.  
 Poinos 416.  
 polio 366.  
 pollen 288.  
 polliceor 462.  
 pollingo 29, 285.  
 pollubrum 368.  
 polluo 368, 369.  
 polteo 273.  
 Pompejus 465, 635.  
 pomum 287.  
 \*Πόμπος 464.  
 pondus 221.  
 pone 716.  
 pono 285.  
 pons 270.  
 pontifex 270.  
 Pontius 464.  
 popina 466.  
 poplicus 444.  
 popularis 177.  
 populiscitum 109.  
 pōpulus 226, 277.  
 pōpulus 181.  
 porca (field-bed)  
 166.  
 porcus 166, 728.  
 porricio 285.  
 porrigo 185.  
 porro 284.  
 porrum 433.  
 port- 285.  
 porta 78, 272.  
 portio 281, 282.  
 porto 281, 282.  
 portus 272.  
 pos 716.  
 (posmos 716.)  
 possideo 285.  
 possum 282.  
 post 716.  
 posterus 716.  
 postremus 716.  
 Pota 282.  
 poteis 282.  
 potens 282.  
 potestas 282.  
 potio 280.  
 potior 282.  
 potior (adj.) 282.  
 potis 282.  
 potissent 282.  
 poto 280.  
 poter 280.  
 potus 280.  
 prae 284.  
 praebenda 331.  
 praeco 459.  
 praeda 196.  
 praedium 196.  
 praefica 296.  
 praepes 210.  
 praeputium 287.  
 praes 196, 249, 250.  
 praesaepo 161.  
 praesens 207.  
 praevides 250.  
 prandium 284.  
 pratum 537.  
 \*pre 284.  
 prehendo 196.  
 pretium 273.  
 primus 73, 284.  
 prior 284.  
 priscus 284, 479,  
 480.  
 pristinus 284, 479.  
 pro 284.  
 probum 300.  
 procella 146.  
 procerus 154.  
 Procina 728.  
 procul 490.  
 prod- 284.  
 prodigus 585.  
 progenies 175.  
 proles 356.  
 prolubium 367.  
 promenervat 313.  
 \*promom 284.  
 promulsis 637.  
 pronus 284, 306.  
 prosapia 379.  
 Prosepnais 265.  
 Proserpina 265.  
 prosper 704.  
 pru (Umbr., Osk.)  
 284.  
 prudens 324.  
 prūna 286, 287.  
 \*prusikurent 468.  
 pubes 287.  
 publicus 444.  
 puer 271, 287, 588.  
 puera 287.  
 \*pufe 466.  
 pugil 286, 525.  
 pugillaris 286.  
 pugillus 286.  
 pugnus 286, 525,  
 714.  
 (puklo 287.)  
 pulcher 8.  
 pullex 374.  
 pullus (grey) 271.  
 pullus (young of  
 animals) 287, 588,  
 647.  
 pulmo 280.  
 pulsare 268.  
 pulsus 268.  
 pulvis 288.  
 pumilio 287.  
 pumilus 287.  
 (pumpaffans 635.)  
 \*pumpe 487.  
 pungo 286.  
 punio 281.  
 pupa 287.  
 pupilla 287.  
 pupus 287.  
 \*pur 285.  
 \*purdovitu, purtu-  
 vitu 237.  
 \*purka 166.  
 purpura 416, 438.  
 purulentus 286.  
 purus 286.  
 pus 286.  
 \*pus 716.  
 pusa 287.  
 puscinus 286.  
 \*pust 716.  
 \*pustru 716.  
 pustula 509.  
 pusula 509.  
 pusus 287.  
 putamen 262.  
 putator 262.  
 puteo 286, 420.  
 puter 286.  
 (puterei 728.)  
 (phtiad 282.)  
 putidus 286.  
 puto 262.  
 \*putrespe 466.  
 (puturus 728.)  
 (pūtūruspid 466.)  
 putus (pure) 262,  
 286, 520.  
 putus (boy) 271,  
 287.  
 qu and e 470.  
 quadraginta 444.  
 quadrimus 201.  
 quadringenti 392.  
 quadru- 488.  
 qualis 466.  
 quam 466.  
 quando 466.  
 quantus 466, 467.  
 quartus 488.  
 quater 488.  
 quattuor, quattor  
 27, 276, 444, 488.  
 -que 138, 467, 487.  
 queo 471.  
 quid 27, 447, 489.  
 quies 145.  
 Quinctilis 464.  
 quinque 464, 465,  
 521, 711.  
 quintus 464.  
 quis 489.  
 quisque 467, 487.  
 quisquillae 169, 707.  
 quo 466.  
 quod 466.  
 quoquo 465.  
 quot 466.  
 quotannis 467.  
 quotidie 467.  
 quotus 466, 467.  
 r from s 454.  
 radius 352, 670.  
 radix 348, 352, 712.  
 ramus 352.  
 rapa 350.  
 rapax 263, 534.  
 rapidus 263.  
 rapina 263.  
 rapio 263.  
 raptor 263.  
 rapum 350.  
 ratio 341.  
 ratis 342.  
 ratus 341.  
 raucus 39, 356.  
 ravis 39, 356.  
 Reate 353.  
 rebito 473.  
 reboo 477.  
 recens 134.  
 rectus 185.  
 Rediculus 168.  
 refuto 204, 205.  
 regio 185.  
 rego 185.  
 religens 364.  
 religio 257, 363, 364.  
 religiosus 257.  
 relinquo 462.  
 reliquus 462.  
 reluo 368.  
 remedium 243, 312.  
 remigium 342.  
 reminiscor 312.  
 remus 46, 342, 554.  
 repens 351.  
 repente 351.  
 repentinus 351.  
 repo 265, 354.  
 resero 354.  
 restauro 212.  
 rete 173, 341, 354.  
 revereor 346, 587.  
 rex 185.



- rideo 622.  
 ridica 724.  
 rigeo 351.  
 rigidus 351.  
 rigo 191.  
 rigor 351.  
 rima 724.  
 rivus 366.  
 robigo 252.  
 robur 353.  
 robustus 208.  
 rogos 185.  
 Roma 353.  
 Romulus 353.  
 rosa 352.  
 rota 343.  
 rotundus 343.  
 ruber 146, 252, 304, 420, 447.  
 rubeta 304.  
 rubigo 146.  
 ructo 181.  
 ructus 181.  
 rudis (staff) 352, 530.  
 \*rufu 252, 420, 447.  
 rufus 252.  
 ruga 349, 481.  
 rugio 349.  
 rugitus 349.  
 rumen 353.  
 Rumina 353.  
 rumino 181.  
 rumito 356.  
 Rumo 353.  
 rumor 356, 650.  
 rumpo 263, 266.  
 runco 349, 529.  
 rupes 266.  
 rutilus 252, 420.  
 (saahtum 383.)  
 sabulum 696.  
 sacer 171, 379.  
 sacerdos 237.  
 saeculum 379.  
 saepe 115.  
 saepio 115, 155, 161.  
 Saeturnus 379.  
 Saguntum 618.  
 (sakaralkum 432.)  
 sal 548.  
 salacia 549.  
 salax 548.  
 sale 549.  
 salebra 548.  
 sales 548.  
 Salii 548.  
 salinum 548.  
 salinus 548.  
 salio (salt) 548.  
 salio (leap) 517, 548, 712.  
 saliva 372, 615.  
 salix 136.  
 salsamentum 548.  
 salsus 548.  
 salto 548, 712.  
 saltus (glade) 373.  
 saltus (leap) 548.  
 salubris 371.  
 salum 372, 549.  
 salus (σάλος) 372, 549.  
 salus 371.  
 salveo 371.  
 salvus 371, 551, 575, 585.  
 sam 394.  
 sancio 171, 379.  
 sanctus 379.  
 sanus 378.  
 sapa 512.  
 sapidus 512.  
 sapiens 512.  
 sapio 442, 464, 469, 512.  
 sapor 685.  
 sapsa 394.  
 sarmen 263.  
 sarmentum 263.  
 sarpo 263.  
 sas 394.  
 satias 398.  
 saties 398.  
 satietas 398.  
 satio 398.  
 satis 282, 398, 649, 685.  
 satur 398, 649, 685.  
 Saturnus 379.  
 satus 379.  
 Sauracte 552.  
 saxum 109, 146, 668.  
 scaber 167.  
 scabies 167, 680.  
 scabo 167.  
 scaeva 166.  
 Scaevola 166, 361.  
 scaevus, scaevitas 166, 692.  
 scalpo 56, 60, 166, 178.  
 scalprum 166.  
 scamnum 167.  
 scando 166.  
 scandula 246.  
 scapres 167.  
 Scaptensula 373.  
 scapus 167.  
 scaurus 166.  
 scelus 373.  
 scindo 54, 247, 654.  
 scindula 246.  
 scintilla 504, 697.  
 scio 109, 145, 146, 489.  
 scipio 167.  
 scirpeus 352.  
 scirpo 352.  
 scirpus 352, 511, 703.  
 scisco 109, 110.  
 scopae 167.  
 scopio 167.  
 scopus 167.  
 scortum 508.  
 scoruscus 694.  
 scribo 180.  
 scrobis 180, 703.  
 scrofa 180, 703.  
 scruta 703.  
 scrutinium 703.  
 scrutor 703.  
 sculpo 56, 178, 703.  
 scutum 169, 429.  
 se 393, 699.  
 secendo 468.  
 seco 146.  
 sector 460.  
 secundus 460.  
 secuta est 468.  
 sedeo 92, 240.  
 sedes 240.  
 sedo 240.  
 sedulus 241.  
 seges 9.  
 sella 240, 241.  
 semel 392, 713.  
 semen 156, 379.  
 sementis 394.  
 semi- 325.  
 semis 325.  
 semper 311.  
 senatus 311.  
 Seneca 311.  
 senecio 311.  
 senectus 311.  
 senesco 311.  
 senex 311, 374, 639, 679.  
 senilis 311.  
 senium 311.  
 sentio 99.  
 septem 52, 265.  
 septum 520.  
 septimus 265.  
 sequius 468.  
 sequor 119, 460, 686.  
 sera 354.  
 serenus 551.  
 series 354.  
 sero (stitch) 341, 354, 685.  
 sero (sow) 379, 605.  
 serpens 265.  
 serpo 265, 354.  
 serpula 265.  
 sertum 354.  
 serum 349, 685.  
 servo 347, 551.  
 servus 551.  
 sese 543.  
 Sestius 131.  
 severus 481.  
 sevi 379.  
 sex, sextus 384.  
 si 394.  
 sice, sic 394.  
 siccus 393, 742.  
 sido 240.  
 sidus 246.  
 silva 109, 373.  
 silvaticus 234, 373.  
 silvestris 234, 373.  
 silvosus 373.  
 similis 9, 322, 323.  
 simitu 322, 323.  
 simplex 392, 713.  
 simul 322, 323.  
 simulo 322.  
 simultas 322.  
 sincinia 392.  
 singillatim 648.  
 singuli 392, 713.  
 sino 677.  
 sisto 211, 274, 401, 707.  
 Sisupus 416.  
 \*snata 319.  
 soc 394.  
 socer 28, 136.  
 socius 460.  
 socors 368.  
 socrus 136.  
 sodalis 251.  
 sodes 251.  
 sol 400, 551.  
 solea 241, 374.  
 solidus 551.  
 solium 240, 241.  
 sollemnis 293.  
 sollicitus 551.  
 sollus 551, 685.  
 solor 551.  
 solum 241, 374.  
 solvo 368, 554.  
 somnium 289.  
 somnus 136, 289.  
 sons 207, 375, 376.  
 sonticus 207, 375.  
 sopio 289.  
 sopor 289.  
 Soracte 552.

- Soranus 552.  
 sorbeo 295.  
 sorbilis, sorbillo, sorbitio 295.  
 sorex 354.  
 soror 354.  
 sorptus 295.  
 sors 354.  
 sos 394.  
 suos 393.  
 spargo 275, 288.  
 spatium 272, 697.  
 specio 168, 432, 465, 676, 697.  
 specto 168.  
 specula 100, 168.  
 speculum 100, 168.  
 speres 704.  
 sperno 288, 677.  
 spero 704.  
 spes 704.  
 spica 224, 694.  
 spicio 168.  
 spiculum 694.  
 spina 224, 350, 694.  
 spiritus 305.  
 spoliū 169, 697.  
 sponte 272, 704.  
 sporta 288, 503, 715.  
 sportula 288, 715.  
 spuo 285.  
 spurcus 275.  
 spurius 288.  
 sputum 285.  
 squalidus 146.  
 squalor 146.  
 squatina 145.  
 squatus 145.  
 ss (= s) 673.  
 stabilis 211.  
 stabulum 211, 720.  
 stagnum 219.  
 stamen 211.  
 stapia 214.  
 statim 211, 212.  
 statio 211, 212.  
 Stator 211.  
 statua 211.  
 statuo 211.  
 status 211.  
 stega 186.  
 stella 206.  
 stercus 167, 535, 697, 700.  
 sterilis 213.  
 -sternare 706.  
 sterno 215, 216.  
 sternuo 706.  
 sterquilinium 167.  
 steti 359.  
 stilus 215.  
 stimulus 215.  
 stinguo 215, 700.  
 stipa 216, 540.  
 stipatores 214.  
 stipes 214, 216.  
 stipo 60, 214.  
 stipula 214.  
 stipulor 214.  
 stiva 212.  
 stilararius 216.  
 stilatus 216, 278, 555.  
 stilocus 212.  
 sto 211, 401, 720.  
 stolidus 212, 216.  
 storea 215, 695.  
 strages 216.  
 stramen, stramentum 215.  
 strangulo 380.  
 stratus 215, 555.  
 strenuus 213, 722.  
 strictim 380.  
 strictura 380.  
 strictus 380.  
 strideo 695.  
 striga 380, 381.  
 strigilis 380, 556.  
 strigmentum 380.  
 stringo 380 (bis), 381.  
 strues 216.  
 struices 216.  
 struo 216, 597.  
 studeo 697, 700.  
 studium 697.  
 stultus 212, 216.  
 stupa 216, 540.  
 stupeo 216, 219.  
 stupidus 216.  
 sturnus 355, 451, 704.  
 Suada, Suadela 229.  
 suadeo 229.  
 suadus 229.  
 suavis 229.  
 sub 289, 290.  
 sub dio 236.  
 subfimen 258.  
 subfio 258.  
 subidus 380.  
 subolesco 356.  
 subter 290.  
 subula 381.  
 sucerda 168.  
 sucus 349, 464.  
 sudarium 242.  
 sudo 242.  
 sudor 242.  
 suesco, suetus 251.  
 suggrunda 197.  
 suinus 382.  
 sulcus 137.  
 sum (am) 105, 375.  
 sum (accus.) 394.  
 summus 290.  
 suo 374, 381.  
 super 289.  
 superbia 540.  
 superbus 476.  
 superus 290, 540.  
 supinus 290.  
 suprad 290.  
 supremus 290.  
 surgo 290.  
 sursum 290.  
 sus- 290, 293.  
 sus 381.  
 suscipio 290.  
 suspito 210.  
 susque 290.  
 sustuli 290.  
 susum 304.  
 susurrus 354.  
 sutela 381.  
 sutor 381.  
 sutura 381.  
 sutus 381.  
 suus 251, 393.  
 (sua) 394.  
 tabes 61, 218.  
 tabesco 61.  
 tactio, tactus 218.  
 (tadait 218.)  
 tagax 218.  
 tago 218.  
 talpa 166, 700.  
 tango 218.  
 tarmes 222.  
 tata 225.  
 taurus 218, 429.  
 tauta (Osk., Umbr.) 226.  
 tectum 186, 429.  
 tegimen 186.  
 tego 56, 186, 429, 695.  
 tegula 186.  
 tela 219.  
 telum 219.  
 temere 545.  
 temo 219.  
 templum 221, 370.  
 tempto 65, 217.  
 tempus 218.  
 tenax 217.  
 tendicula 217.  
 tendo 65, 217, 218, 255.  
 tenebrae 358, 545.  
 teneo 65, 217, 545.  
 tener 217, 223.  
 tenor 217.  
 tentio 217.  
 tento 217.  
 tentus 217.  
 tenuis 65, 217, 223, 326, 475, 521.  
 tenuis (cord) 217.  
 tenuis (adv.) 217.  
 tepeo 502.  
 tepidus 502.  
 ter 226.  
 terebra 222, 545.  
 (teremenniu 222.)  
 terentinae 223.  
 Terentius 223.  
 terenum (Sabin.) 223, 224.  
 teres 222, 223.  
 tergo 380, 381, 599.  
 termen, terminus 222.  
 \*terminu 222.  
 termo 222.  
 tero 60, 222.  
 terra 224, 235.  
 terreo 225.  
 terror 225.  
 tertius 226.  
 (tesavrom 570.)  
 tesqua 224.  
 testa 131, 148, 220, 224.  
 testu 131.  
 Tettius 225.  
 texo 219, 220.  
 textor, textura 219.  
 tibi 358.  
 Tibur 449.  
 tignum 219, 364.  
 Tigris 215.  
 tilia 211.  
 tinctilis 219.  
 tinctio, tinctura 219.  
 tinctus 219.  
 tineia 222.  
 tingo 219, 535, 711.  
 tiro 223, 224.  
 \*Tlatie 279.  
 (t)latus 220.  
 tolerint, toli 221.  
 tolero 220.  
 tolleno 220, 221.  
 tollo (verb.) 220, 221.  
 tollo (subst.) 220, 221.  
 tolutum 220, 221.  
 tonare 217, 621.  
 tondeo 221.  
 tonitru 217.  
 torcular, torculum 468.  
 tormentum 468.  
 torpeda 653.



- torpeo 214, 224.  
torqueo 468.  
torques 468.  
torrens 224.  
torreo 224.  
torris 224.  
torus 215, 695.  
torvus 480.  
tosto 224.  
tostus 224.  
tota (Osk., Umbr.) 226.  
totondi 265.  
touta (Osk., Umbr.) 226, 570.  
\*traf 222.  
traho 191.  
trames 222.  
trans 77, 222, 273.  
trapes 469.  
trapetum 469.  
Trasimenus 222.  
\*trefu 227.  
tremo 225.  
tremor 225.  
tremulus 225, 241.  
trepidus 468.  
trepit 469.  
tres 226.  
tribula 222.  
tribulis 177.  
tribulo 222.  
tribus 227.  
tricae 468.  
tricolor 468.  
triduum 573.  
trimus 201.  
tripodo 245.  
tripudium 245.  
tiremis 342.  
tristis 225.  
triticum 222, 223.  
tritrus 223.  
trua 222, 223.  
trux 599.  
tu 219, 442.  
tüber 226.  
tudes 227.  
tudito 227.  
tugurium 186.  
tuli 220, 554.  
Tullius 221.  
Tullus 221.  
tulo 106, 220.  
tum 318, 687.  
tumeo, tumidus, tumor 226.  
tumultus 226.  
tumulus 226, 527.  
tunc 318.  
tundo 227, 695.  
turba 227.  
turbo (verb.) 227.  
turbo (subst.) 227.  
turgeo 700.  
turma 227.  
\*turu 218.  
turunda 222, 223.  
tus 259.  
tutus 520.  
tuus 219.  
(tūvta 368.)  
(tūvtlks 226.)  
uber (udder) 260.  
uber (richness, rich) 260, 261.  
ubi 466, 687.  
udor 249.  
udus 249.  
ulcero 137.  
ulcerosus 137.  
ulcus 137.  
ulna 374, 554.  
uls 309.  
ulterior, ultimus 228.  
ulucus 371.  
ulula 371.  
ululabilis 371.  
ululatus 371.  
ululo 371.  
umbilicus 294, 322.  
umbo 294.  
umecto 187.  
umerus 339, 684.  
umidus 187.  
umor 187, 205, 684.  
umquam 318.  
uncia 320, 713.  
uncinus 130.  
uncus 130, 131.  
unda 248.  
unguis 321, 322, 422.  
ungulus 130, 131.  
unguo 661.  
unicus 320.  
unio 320.  
unus 320.  
upupa 264, 265, 510, 700.  
urbs 79.  
urceus 350.  
urgeo 181.  
urina 350.  
urinator 350.  
urinor 350.  
urna 350.  
uro 350, 398.  
urruncum 349.  
ursus 133.  
urvus 481.  
\*us-tentu 217.  
ustio 398.  
ustor 398.  
ustulo 398.  
uter 466.  
uterque 466, 467.  
uterus 228.  
uveo 187, 249.  
uvor 187.  
uxor 136.  
v through gv from g 174, 596; v becoming b 226, 369, 370.  
vacca 593.  
vadimonium 249.  
vado 473, 595, 685.  
vador 249.  
vadum 473, 595.  
vae 563.  
vagus 542.  
vah 563.  
valeo 594.  
valgus 480.  
vallis 360.  
vallum 360.  
vallus 360.  
valva 589.  
valvola 359.  
vapidus 141.  
vapor 142, 458.  
vapore 142.  
vappa 142.  
varus 360.  
vas (vādis) 249.  
vas (vāsis) 476.  
vasto 596, 624.  
vea 193.  
vecors 36, 143.  
vectis 193.  
vectura 192.  
vegeo 187.  
vegetus 180, 187.  
vehemens 193.  
vehendus 664.  
vehes 192.  
vehiculum 192.  
veho 33, 106, 192.  
veicus 163.  
Velabrum 360.  
(Velestrom, Volsc. 360.)  
Veliae 360.  
velites 475.  
Velitrae 360.  
vello 9.  
vellus 344, 556, 591.  
velo 193.  
velox 475.  
velum 107, 192, 193.  
vendo 322.  
venenum 451.  
vaneo 322.  
venio 64, 174, 458, 473, 476, 545.  
venter 174.  
ventus 387.  
venum 322.  
venustus 208.  
ver 42, 388.  
verber 351.  
verbum 343.  
verecundus 346.  
vereor 101, 346, 587.  
\*verfale 343.  
vergo 481.  
veritus 346.  
vermiculor 564.  
vermis 552, 553.  
verna 207.  
vernus 388.  
vero (Osk., Umbr.) 258.  
verres 345.  
verriculum 3.  
verro 156, 34.  
verruca 348.  
versus 345.  
vertebra 545.  
verto 349.  
Vertumnus 430.  
vesanus 36.  
vespa 382, 503, 596, 699.  
vesper, vespera 377, 686.  
vespertinus 377.  
Vesta 399.  
vestigium 36.  
vestio 376.  
vestis 22, 376.  
veto 460.  
vetulus 208.  
Veturius 208.  
vetus 208.  
vetustus 208.  
vexillum 107, 193.  
vexo 192, 193.  
via 192, 193.  
vibro 298.  
vices 135, 663.  
vicesimus 135.  
vicia 343, 588.  
vicinus 163, 177.  
vicissim 135.  
victus 476.  
vicius 163.  
video 242.  
vidua 36, 640.  
viduvium 640.  
vieo 389, 390, 564, 593.  
viesco 476.  
vigeo 180, 187.

- vigil 180, 187.  
 viginti 37, 133, 135.  
 164, 444.  
 vigor 187.  
 villus 344, 591.  
 vimen 389, 564, 593.  
 vinco 107, 448.  
 vindex 322.  
 vinibua 280.  
 vinum 390, 564.  
 viola 388.  
 vir 307, 589.  
 virga 185, 351.  
 virgo 185.  
 \*virseto 242.  
 virtus 307.  
 virus 389.  
 vis 389, 589.  
 viscera 699.  
 viscum 699.  
 viscus 699.  
 visio 230.  
 visium 230.  
 viso 242.  
 visus 242.  
 vita 476.  
 (Vitellii 208.)  
 vitex 389.  
 vitiligo 293.  
 vitis 389, 390, 564.  
 vito 135.  
 Vitoria 135.  
 vitrum 242, 579.  
 vitta 389.  
 vitula 208.  
 vitulus 208, 712.  
 vitus 389.  
 (viti 193.)  
 vividus 187.  
 vivo 476, 597.  
 vivus 187, 459, 476.  
 voco 459.  
 volgus 601.  
 volnus 372.  
 volo (wish) 60, 357,  
 443, 549, 550,  
 584.  
 volo (fly) 475.  
 volop 264.  
 voltur 557.  
 volucrum 568.  
 volumen 358, 568.  
 voluntarius 549.  
 voluntas 549.  
 volup(e) 60, 264,  
 549.  
 voluptis, voluptas  
 264.  
 voluta 358.  
 volutim 358.  
 voluto 358.  
 volva 358, 359.  
 volvo 358, 359, 557,  
 565, 568, 576,  
 606.  
 vomer 324.  
 vomica 324.  
 vomitio 324.  
 vomitus 324, 325.  
 vomo 324.  
 vorago 477, 478.  
 vorax 477.  
 voro 61, 174, 477.  
 vorro 345.  
 -vorus 477.  
 voto 460.  
 votum 520.  
 voveo 702.  
 vos 601.  
 vox 263, 376, 459.  
 voxor 136.  
 vulpecula 358.  
 vulpes 161, 358,  
 442, 596.  
 vultur 557.  
 Zabolus 617.  
 zeta 617.

## ROMANCE.

- abeille (Fr.) 31,  
 444.  
 ancien (Fr.) 311.  
 apôtre (Fr.) 449.  
 aruta (Ital. dial.)  
 721.  
 attatare (Ital. dial.)  
 667.  
 avant (Fr.) 31.  
 avere (Ital.) 442.  
 averzo (Ital. dial.)  
 660.  
 Bologna (Ital.) 451.  
 cendre (Fr.) 455.  
 cent (Fr.) 442.  
 cercare (Ital.) 158.  
 cheval (Fr.) 442.  
 con (Ital.) 449.  
 dans (Fr.) 32.  
 del (Ital.) 31.  
 devant (Fr.) 31.  
 diacre (Fr.) 452.  
 dobia (Ital. dial.)  
 659.  
 dōven (Ital. dial.)  
 659.  
 épée (Fr.) 723.  
 essai (Fr.) 34.  
 esso (Ital.) 668.  
 estable (Provenç.)  
 720.  
 estar (Span.) 720.  
 fischiare (Ital.) 696.  
 fu (Span.) 304.  
 furnice (Walach.)  
 449.  
 gäter (Fr.) 596.  
 ghiaccio (Ital.) 624.  
 giacere (Ital.) 624.  
 giacinto (Ital.) 624.  
 giacitura (Ital.) 624.  
 Giovanni (Ital.) 505.  
 Giovedì (Ital.) 584.  
 glace (Fr.) 669.  
 golpe (Ital.) 442,  
 596.  
 guastar (Ital.) 596,  
 624.  
 guêpe (Fr.) 596.  
 haut (Fr.) 684.  
 hedrar (Span.) 684.  
 hombre (Span.) 451.  
 huebra (Span.) 688.  
 huevo (Span.) 688.  
 huile (Fr.) 688.  
 huit (Fr.) 684, 688.  
 io (Ital.) 689.  
 istable (Prov.) 720.  
 jinu (Walach.) 450.  
 lagrima (Ital.) 444.  
 lido (Ital.) 444.  
 lieu (Fr.) 31.  
 luogo (Ital.) 31.  
 medesimo (Ital.) 32.  
 mischio (Ital.) 696.  
 mueso (Span.) 449,  
 544.  
 namella (Prov.) 451.  
 natte (Fr.) 449.  
 occhi (Ital.) 113.  
 ouir (Fr.) 31.  
 padre (Ital.) 31.  
 pellegrino (Ital.)  
 449.  
 perdrix (Fr.) 455.  
 père (Fr.) 31.  
 près (Fr.) 191.  
 razzo (Ital.) 670.  
 rien (Fr.) 449.  
 rossignuole (Ital.)  
 449.  
 saggio (Ital.) 34.  
 sasso (Ital.) 668.  
 savoir (Fr.) 442.  
 suspina (Walach.)  
 452.  
 Tatars, -s (Ital. dial.)  
 667.  
 tilfba (Ital. dial.)  
 667.  
 timbre (Fr.) 451.  
 tivoli (Ital.) 449.  
 veleno (Ital.) 451.  
 vensser (Prov.) 448.  
 verde (Ital. dial.)  
 659.  
 vincere (Ital.) 448.  
 zovin (Ital. dial.) 660.



## IV. SANSKRIT INDEX.

(The nouns are as a rule given in the nominative.)

- |   |   |   |
|---|---|---|
| <p>a- 306.<br/>         ācas 309.<br/>         ācaharās 199.<br/>         āsam 339.<br/>         āsas 339.<br/>         āshatis 190.<br/>         āhas 170, 190, 191, 521.<br/>         āhija(n)s 191.<br/>         āhūs 87, 190, 527.<br/>         āhris 322.<br/>         aksh 131.<br/>         akshān 463, 698.<br/>         akshām 463.<br/>         ākshas 383, 431.<br/>         ākshi 101, 463, 698.<br/>         akhkhalā 574.<br/>         agnis 679.<br/>         āgru 613.<br/>         aghās 190.<br/>         ānkās 130.<br/>         ānkuçās 131.<br/>         ānghris 322.<br/>         āk 130.<br/>         āg 41, 68, 170, 171.<br/>         āgākā 171.<br/>         āgās (driver) 170.<br/>         āgās (buck) 171.<br/>         āgā 171.<br/>         āgikā 171.<br/>         āginam 172.<br/>         āgirās 170, 172.<br/>         āgman 170.<br/>         āgmās 170.<br/>         āgras 171.<br/>         āgrjas 171.<br/>         āg 661.<br/>         ānimān 451.<br/>         āpūs 451.<br/>         āti 71, 207.<br/>         āti-mātras 71.<br/>         āti-rātras 71.<br/>         attā 207.<br/>         ātj-ahna-s 208.<br/>         ātrastās 225.<br/>         ātha 208, 422.<br/>         ād 40, 73, 240.<br/>         ādakās 240.</p> | <p>ādanam 73, 240.<br/>         ādbhās 469.<br/>         ādman 73, 240.<br/>         ādmarās 378.<br/>         a-djā 236.<br/>         ādjam 73.<br/>         ādha 422.<br/>         ādhi 33.<br/>         an 40, 67, 73, 108, 305, 387, 730.<br/>         an- 306, 439.<br/>         ana 306.<br/>         analas 108.<br/>         anas 305.<br/>         anilās 73, 305.<br/>         ānikas 305, 464.<br/>         anu 306.<br/>         an-udrās 248.<br/>         anu-lip 266.<br/>         anu svadhām 251.<br/>         āntamas 309.<br/>         antār 309.<br/>         āntaras 309.<br/>         antarā 309.<br/>         antaritas 309.<br/>         āntas 206.<br/>         ānti 205.<br/>         antikām 205.<br/>         antikās 205.<br/>         antidevās 205.<br/>         antrām 309.<br/>         āndhas 251.<br/>         ānnam 73, 240.<br/>         anjakās 357, 675.<br/>         anjātrā 310, 357.<br/>         anjātha 310.<br/>         anjās 310, 451.<br/>         anjōnja 357.<br/>         ap 410, 469, 470.<br/>         āpa 263, 290.<br/>         āpa-kitas 488.<br/>         āpa-tras 225.<br/>         āpa-mā 324.<br/>         āpara 263.<br/>         āpa-vadh 260.<br/>         āpa-var 550.<br/>         āpas 35, 67, 68, 276.</p> | <p>apa-skaras 156.<br/>         āpi 32, 35, 263, 264.<br/>         āpi-gās 264.<br/>         āpitvām 264.<br/>         āpi-dhānam 264.<br/>         āpi-masg 33.<br/>         āpi-var 550.<br/>         āpnas 510.<br/>         āpnasvān 510.<br/>         āpnaḥ-sthās 510.<br/>         āpj-añg 32.<br/>         ābdas 469.<br/>         ābhī 33, 36, 293.<br/>         ābhi-ghrā 526.<br/>         ābhi-ḡnū 179.<br/>         ābhītas 293.<br/>         ābhi-mātis 312.<br/>         ābhi-juḡ 182, 397.<br/>         ābhi-rāg 33.<br/>         ābhi-sag 34.<br/>         ābhi-su 395.<br/>         ābhrām 338, 528, 532.<br/>         ābhvas 510.<br/>         am 40, 67, 546.<br/>         āma 724.<br/>         āmatram 323.<br/>         āmas (vehemence) 67.<br/>         āmas (raw) 338.<br/>         amā (together) 209.<br/>         amā (at home) 724.<br/>         amāt 724.<br/>         āmivam 546.<br/>         āmivā 546.<br/>         amftam, amftas 331.<br/>         āmbaram 528.<br/>         āmbu 328, 528.<br/>         āmbas 339.<br/>         āmbhas 338, 528.<br/>         āmbhṛnās 532.<br/>         āmlās 338, 339.<br/>         āmli 339.<br/>         ar (ἀπαρίσκειν) 46, 339, 340.<br/>         ar (raise oneself, go) 46, 63, 346, 551, 556.<br/>         aratis 343.<br/>         aratnās 374, 554.<br/>         āram 71, 339.<br/>         arās 339.<br/>         arālas 374.<br/>         aritā 342.<br/>         aritrām 341, 342, 343, 554.<br/>         aritrās 342.<br/>         āris 340.<br/>         arushā 120.<br/>         ārushī 120.<br/>         arkās 137.<br/>         argh 483.<br/>         arghām 190.<br/>         arghjas 190.<br/>         ark 137, 160, 486.<br/>         arkīs 137.<br/>         arkḥ 556.<br/>         arg 185, 671, 729.<br/>         arganam 185.<br/>         ārgunas 172.<br/>         ardḥ 250, 529, 530.<br/>         ārdhukas 250.<br/>         arpajāmi 340.<br/>         arblakās 295.<br/>         ārbhas 295.<br/>         arjās 339, 340.<br/>         ārvan 120.<br/>         arç 133.<br/>         arsh 342, 556.<br/>         arh 190, 483.<br/>         ārhan 190.<br/>         arhas 190.<br/>         algās 183.<br/>         av (consider) 386, 391.<br/>         av (clothe) 391.<br/>         āva 33, 35, 228.<br/>         āva-ghrā 526.<br/>         āva-nōḡanam 317.<br/>         a-vaçās 136.<br/>         āvas 386.<br/>         āva-skaras 156, 167.<br/>         avikās 390.<br/>         avikā 390.</p> |
|---|---|---|

- ávis (devoted) 386, 391.  
 ávis (sheep) 390, 589, 590.  
 avjājas 390.  
 ávjas 390.  
 aṣ (eat) 114, 188, 679.  
 aṣ (reach) 138, 308, 309, 461.  
 áṣan 131.  
 áṣanam 679.  
 áṣānis 131.  
 áṣman 595.  
 aṣmantam 595.  
 aṣmarás 131.  
 áṣmā 131.  
 aṣrā 133.  
 -aṣras 131.  
 áṣris 131.  
 aṣvatarás 462.  
 áṣvas 25, 78, 457, 462.  
 áṣvā 457.  
 áṣvjas 462.  
 aṣtān 163.  
 aṣtāmás 163.  
 aṣtāu 163.  
 as (be) 375, 433.  
 as (throw) 206, 401, 593.  
 asan 398.  
 ásuras 375, 376.  
 ásus 375, 376.  
 ástg 398.  
 ástam 376, 378.  
 ástar 206.  
 aṣthān 209.  
 aṣthī 41, 209, 504.  
 aṣmāt 433, 689.  
 asram 398.  
 ahām 307, 525, 689.  
 áhis 193.  
 Áhis 194.  
 ā-kū 152.  
 ágas 170.  
 āghrā 526.  
 āgīs 170, 642.  
 ātis 317.  
 ātmān 62, 387.  
 ā-dar 134, 235.  
 ādaras 234.  
 ādāja 648.  
 ādārás 237.  
 ā-dṛtjā 235.  
 ādjās 240.  
 ānaṭ 308.  
 ānanam 306.  
 ānās 306.  
 āp 33, 34, 511.  
 āpas 469.  
 ā-pf̄k 165.  
 ā-pf̄-tas 273.  
 ā-plu 279.  
 āmās 338.  
 āmīkshā 334.  
 ājāvanam 627.  
 ā-jas 377.  
 ājūs 385.  
 ājus 385.  
 ā-rabh 292.  
 ārushī 340.  
 ārdrajāmi 229.  
 ādrás 229.  
 ā-li 366.  
 ā-varaṇam 360.  
 ā-ṣir 147.  
 āṣūs 131.  
 āṣkarjas 384.  
 ās (ās) 375, 376.  
 ās (sit) 377, 378.  
 ā-sad 241.  
 āsān 375.  
 āsanam 377.  
 āsam 377.  
 āsāmis 325.  
 ā-sphālanam 373.  
 āsjam 375.  
 āha 399.  
 ā-hāvás 205.  
 i 23, 67, 385, 401, 605.  
 iṣkṣā 402.  
 itis 401.  
 iddhas 250.  
 idh 250.  
 idhmás 250.  
 indus 245.  
 indh 250.  
 indhanam 250.  
 ijar 551.  
 i-raḡ 185, 720.  
 i-radh 720.  
 ish (sap, strength) 401.  
 ish (send away) 402.  
 ish (seek) 402, 605.  
 ishīrás 401.  
 ishús 75, 402.  
 ishṭás 402.  
 ishmas 402.  
 iksh 29, 463.  
 ikshanam 463.  
 ir 346, 551.  
 irmás 339.  
 ishmas 402.  
 uksh 28, 187, 383, 593.  
 ukshān 187, 593.  
 ugrás 187, 540.  
 ut 33, 386.  
 uttamás 228.  
 uttāras 228.  
 ut-pat 106, 210.  
 ud 72, 228, 248, 523.  
 uda- 248.  
 udakām 248.  
 udán 72, 248.  
 udáram 228.  
 udrá 72, 248.  
 ud-sad 241.  
 úpa 290.  
 upatjas 290.  
 upa-nam 314.  
 upamás 290.  
 upa-ram 325.  
 úparas 290.  
 upári 289, 682.  
 upa-labh 531.  
 upa-viṣ 138.  
 upa-star 215.  
 ubḡ 529.  
 ubh 61, 293.  
 ubbhājas 293.  
 ubbhāu 293.  
 úraṇas 344.  
 ura-bhras 344.  
 úrā 344.  
 urugājām 346.  
 urukákshās 346.  
 urús 71, 346.  
 urvárā 342.  
 ululís 371.  
 úlukas 371.  
 úlúkhalam 359.  
 úlvam 359.  
 uçant 136.  
 ush (burn) 398.  
 ush (morning) 400.  
 ushás 400.  
 ushā 400.  
 ushpás 398.  
 us 42, 595.  
 usrás 400.  
 usrfjā 400.  
 údhan 260.  
 údhar 260.  
 údhas 260.  
 únás 702.  
 úrús 595.  
 úrg 184.  
 úrgas 184.  
 úrgasvant 184.  
 úrgā 184.  
 úrgítas 184.  
 úrṇanābhas 341.  
 úrṇam 344.  
 úrṇavābhis 60, 295.  
 úrṇā 344.  
 úrṇājús 345.  
 úrtikā 349.  
 úrdhvás 348, 505.  
 úrmis 358.  
 ūh 702.  
 ūhas 702.  
 řkshas 133, 431, 698.  
 řgras 185.  
 řgrás 185.  
 řṅg 185.  
 řtis 340.  
 řddhis 250.  
 řdh 33, 352.  
 řbhumāt 292.  
 řbhús 292, 483.  
 řṣas 132.  
 řṣjas 132, 360.  
 řshabhás 342, 360.  
 řshjas 360.  
 ékas 40, 320.  
 ég 181.  
 égatrás 181.  
 égáthas 181.  
 édh 261.  
 édhas 250.  
 éman 401.  
 émas 401.  
 évā 40.  
 évas 385.  
 ógas 187.  
 ógasvant 187.  
 ógijas 187.  
 ka- 39, 447, 458, 466.  
 kāsā 665.  
 kakúbh 539.  
 kákshas 154.  
 kakh 482.  
 kañkanī 141.  
 kañkaras 139.  
 kakkaras 139.  
 kaṇ 141.  
 kaṇapas 141.  
 kápas 502.  
 katamás 466.  
 katarás 466.  
 káti 466.  
 kátthatē 159.  
 kathā 466.  
 kadā 466.  
 kapanā 141.  
 kapālam 148.  
 kapālas 40, 148, 445, 511.  
 kapilás 142.  
 kapis 115, 142.  
 kam (amare) 46.  
 kamp 141, 511, 529.  
 kar (do) 46, 154, 155, 238.



- kar (call) 556.  
kar (kill) 148.  
karakas 144.  
karañkas 144.  
karañās 155.  
karabhās 524.  
karambhās 528.  
karambhā 528.  
karās 524.  
karkaṭakas 143.  
karkaṭas 143.  
karkaras 143, 144.  
karkās 143.  
karkis 143.  
kart 148, 392.  
kartani 148.  
kartṛ 154.  
kartṛi 148.  
kārman 154.  
kary 153.  
karsh 156, 488.  
kal 146.  
kalañkas 146.  
kalāmas 139.  
kalpakas 144.  
kalpanam 144.  
kaljas 140, 554.  
kaljānas 140.  
kavis 152.  
kaṣkit 489.  
kas 146.  
kā- 39.  
kāśja 665.  
kāśjam 665.  
kākanam 154.  
kāmamūtas 324.  
kāravas 39, 153.  
kāras 148.  
kārus 556.  
kāraśman 487.  
kālas 146, 555.  
kīrāgā 39.  
kīnkinī 141.  
kim 27, 39, 447, 489.  
kimu 467.  
kukshās 154.  
kukshīs 154.  
kūtas 466.  
kup 115, 195.  
kubgas 529.  
kumbhās 158, 528.  
kulājam 140.  
kuṣ 159.  
kus 159.  
kūha 466.  
kuhū 259.  
kū 152.  
kūpas 159.  
kūrd 154.  
kūrdanam 154.  
kūhanā 259.  
kūhā 259.
- kṛṇ-āmi, -ōmi 148, 155.  
kṛttis 148.  
kṛpānas 144.  
kṛmīs 552.  
kṛṇās 153.  
kōkas 141.  
kōkilās 152.  
kōkūjatē 152.  
knū 632.  
kmar 140.  
krat 144, 508.  
krātus 155.  
krad 730.  
krand 730.  
kram 40.  
kravis 84, 155.  
kravjam 155.  
krijā 154, 155.  
krī 459.  
kruṣ 534.  
krūrās 155, 156.  
krōcas 534.  
klid 151.  
kva 466.  
kvan 141.  
-ksha 157.  
kshatās 157.  
kshatis 157.  
kshad 40, 62, 246.  
kshan 157, 698.  
kshap 705.  
kshapas 705.  
kshapā 705.  
ksham 499, 675.  
kshājas 157.  
kshajās 705.  
kshar 705.  
ksharās 705.  
kshā 157.  
kshi 157, 698, 705.  
kshitis 157.  
kshitis 705.  
kshur 699.  
kshurās 699.  
kshēmas 145.
- kh 82, 506.  
khañg 380.  
khañgas 380.  
khañgā 380.  
khaḍ 242.  
kham 506.  
kharas 144.  
kharparas 148, 149.  
kharbās 585.  
kharvās 585.  
khalatīs 82.  
khalas 140.  
khalinas 374.  
khalinas 374, 506.  
khalug 146.
- khāḍ 242, 244.  
khāḍanas 244.  
gakh-, gakkh-ati 62, 472, 473.  
gaṇās 174.  
gatās 473.  
gātīs 473.  
gatvā 648.  
gadh 196, 474.  
gadhās 474.  
gabhas 474.  
gabhirās 473, 474.  
gam 40, 62, 64, 473, 545, 648.  
gāmbhan 473, 474.  
gājas 163.  
gar (praise) 177.  
gar (swallow) 61, 174, 477.  
gar (wake) 180.  
garas 477.  
garimān 475.  
gārijas 475.  
garūt 475.  
gārgaras 478.  
gārbhas 478, 479, 491.  
garvarās 176.  
garvās 176.  
gal 474.  
galanas 474.  
galas 478.  
gavajās 478.  
gavalas 478.  
gavākshās 116.  
gavjās 478.  
gavjā 609.  
gah 474.  
gāhanam 473.  
gāhanas 474.  
gā (go) 61, 64, 472.  
gādh 473.  
gādhām 473.  
gāh 473, 474.  
gāhās 473.  
gīr 177.  
gīrā 177.  
gīrikā 478.  
gīris (glis) 478.  
gīris (mountain) 348.  
gu 477.  
guñg 179.  
guñgitam 179.  
gudh 259.  
gurutā 475.  
gurās 475.  
guli 174.  
guljas 358.  
guh 259.
- gūhā 259.  
gūhjas 259.  
gūrtās 198.  
grūganas 175.  
grhākshas 115.  
gōkaras 470.  
gōpās 270.  
gōlam 174.  
gōlas 174.  
gōlā 174.  
gōhas 259.  
gāuras 202, 203.  
gāus (bos, terra) 177, 478.  
gāus (speech) 477.  
gnā 175.  
grabh 478, 479, 492.  
gras 478.  
grah 478, 492.  
grāvan 459, 553.  
grāmas 174.  
grivā 235.  
glapājāmi 538.  
glā 474.
- gh 84.  
gha 526.  
ghan 299.  
ghar (shine) 197, 198, 204, 303, 493, 656.  
ghar (sound) 199.  
ghargharas 199.  
ghargharā 199.  
ghargharitam 203.  
gharmās 493, 494.  
gharsh 204.  
ghā 526.  
ghrās 494.  
ghrās 494, 656.  
ghrshās 204.  
ghrshās (boar) 203.  
ghrshās (rub) 204.  
ghrshvis 203.  
ghrshās-8 488, 494.  
ghrā 204, 526.  
ghrāpām 526.
- k 26 f., 84; from In-  
do-germ. k 487.  
ka 138, 487.  
kakra 158, 715.  
kat 154.  
katasras 488.  
katarthās 488.  
katās 488.  
katvārās 27, 488, 601.  
katvālas 154.  
kand 522.  
kandras 522.

- tāpas 502.  
 Kapalās 142, 511.  
 kam 46.  
 kaj 149.  
 kar 46, 60, 146, 238, 470.  
 Karamās 490.  
 Karās 146.  
 Karū 147.  
 kal 490.  
 Kārakas 470.  
 Kāras 470.  
 Kārus 140, 490.  
 ki 471, 488, 489.  
 kit 489.  
 Kit, Kid (pron. ad-verb.) 489.  
 Kirās 490.  
 Khāttam 168.  
 khad 168.  
 khal 373.  
 khavis 114.  
 Khā 62, 145.  
 Khājā 168.  
 Khid 247, 642.  
 Khidīs 642.  
 Khinnas 247.  
 Khur 200.  
 gaghāna 154.  
 gaghāras 174.  
 gan 46, 52, 73, 175.  
 ganakas 73.  
 gānanam 74.  
 gānam 74.  
 gānas 73, 74, 175.  
 ganitār 73, 175.  
 gānitri 175, 639.  
 gānitvas 73.  
 gāniman 73.  
 gānis 74.  
 gāni 175.  
 gānūs 73, 175.  
 gantūs 73.  
 gabb 174.  
 gambhas 174.  
 gāmbhjas 174.  
 gar (rub) 114, 176.  
 gar (get) 174.  
 gar (sound) 178.  
 garapās 176.  
 garapadrūmas 176.  
 garan 176.  
 garas 176.  
 garā 176.  
 garājus 176.  
 gargāras 176.  
 galam 173, 474.  
 gas (swallow) 147.  
 gūgarti 180.  
 gūgrvis 180, 505.  
 gātīs 73, 175.  
 gātjas 175.  
 gānu 179.  
 gāmā 546, 547.  
 gāmātār 308, 546.  
 gāmīs 547.  
 gāspatis 283.  
 gī 476.  
 ginv 476.  
 givris 176, 298.  
 giv 476, 491.  
 givāthas 476, 477.  
 givās 476.  
 givātu 476.  
 givitām 476.  
 gur 176.  
 gush 177.  
 gūsthis 177.  
 geshā 488.  
 gō-gu 477.  
 gōshas 177.  
 gñā 178.  
 gñātīs 178.  
 gñānam 178.  
 gñās 178.  
 gñā (overpower) 476.  
 gñā (power) 476.  
 gñā (sinew) 477.  
 gñājes 476.  
 gvarās, gvalāti 494.  
 ghalā 494.  
 dī 236.  
 tak 218.  
 tākus 218, 507.  
 tākman 219.  
 tākvan 505.  
 takvās 218, 505.  
 taksh 58, 219.  
 takshaṇam 219.  
 tākshan 58, 157, 219, 431, 698.  
 tatās 217, 545.  
 tātra 634.  
 tātratjas 634.  
 tan 217.  
 tanā 217.  
 tanutē 65.  
 tanūs 65, 217, 223, 475.  
 tāntīs 217.  
 tāntus 217.  
 tanjātūs 217.  
 tanjūs 217.  
 tap 502, 512.  
 tam 221, 545.  
 tāmas 221, 545.  
 tamasām 545.  
 tamasās 545.  
 tāmalās 221.  
 tamisram 545.  
 tar 222, 238.  
 tarapas 222.  
 tarantās 222.  
 taralās 223.  
 tāras 222.  
 tarīs 222.  
 tāruṇas 223, 490.  
 tarkas 468.  
 tarkūs 468.  
 targ 480.  
 targanam 480.  
 tārpas 223.  
 tarp 224.  
 tarpanam 224.  
 tārman 222.  
 tarsh 224.  
 tarshas 224.  
 tālunas 223.  
 tālunī 223.  
 tālpa-s, -m 695.  
 tavas 219.  
 taskaras 36.  
 tasmāt 594.  
 tāgāt 218.  
 tātās 225.  
 tānas 217.  
 tājūs 742.  
 tārā 206, 429.  
 tāvat 594.  
 tāvant 467.  
 tilktas 214, 215.  
 tigmās 214, 215.  
 tig 214, 215, 692.  
 tittirās 225.  
 tittirīs 225.  
 tirās 222.  
 tīras 226.  
 tīram 222.  
 tu 226.  
 tuḡ 218, 220.  
 tud 227, 695.  
 Tūdas 227.  
 tup 227, 605.  
 tūph 227.  
 tubh 676.  
 tumalas 226.  
 tumulam 226.  
 tumulas 226.  
 tump 227.  
 tūmras 226.  
 tur 227.  
 turās 227.  
 turījas 659.  
 tul 220, 554.  
 tulā 220, 221.  
 tūljas 220, 221.  
 tuvi 226.  
 tuvi-gātās 226.  
 tuḡ 219.  
 tūtumās 226.  
 trkvan 468.  
 trṇas 223, 501.  
 trṭījas 226, 659.  
 trpālas 468.  
 trptīs 224.  
 trprās 468.  
 trsh 224.  
 trshās 225.  
 tē 429.  
 tāḡas 214, 215.  
 tōkās 58, 219.  
 tōttram 227.  
 tōdās 227.  
 tōlanam 220.  
 trap 468.  
 trapas 468.  
 tram 223, 225.  
 trājas 226, 720.  
 tras 223, 225.  
 trasas 225.  
 trāsas 225.  
 trīs 226.  
 tva 219.  
 tvaksh 220.  
 tvadijas 635.  
 tvam 77, 219, 601.  
 tvar 227.  
 tvarā 227.  
 dāḡ 64, 133.  
 dāḡas 133.  
 dāḡman 133.  
 daksh 64, 235.  
 dākshas 235.  
 dākshīnas 235.  
 dagh 183.  
 dādhi 252.  
 dāntas 244.  
 dabb 512.  
 dam (tame) 65, 232, 547.  
 dam (house) 234.  
 damanas 232.  
 damās 234.  
 -damas 232.  
 damitas 232.  
 dāmūnas 234.  
 dāmpatis 234, 283.  
 damjas 232.  
 daj 230, 231.  
 dar (consider) 61, 134, 234.  
 dar (split) 232, 235.  
 darād 637.  
 daridrā 237.  
 darḡ 61, 100, 101, 134, 727.



- arh 192, 257.  
 avathús 231.  
 avas 231.  
 aç 64.  
 açan 134, 442.  
 aças 134.  
 as 234.  
 asjus 232, 283.  
 asrás 230.  
 dah 231, 364, 482.  
 dahanas 482.  
 dā (give) 43, 60, 61, 73, 114, 237.  
 dā (bind) 65, 234.  
 dā (cut off) 230.  
 dātár 73, 237.  
 dātis 73, 231.  
 dātrám 73, 231.  
 dātri 639.  
 dānam 73, 237, 439.  
 dāp (get given) 67, 114, 233.  
 dāp (caus. of dā divide) 232.  
 dāman (gift) 73, 237.  
 dāman (bond) 234.  
 dāmā 234.  
 dājakas 73.  
 dājam 648.  
 dājās (dans) 73.  
 dājās (share) 60, 230.  
 dāras 235.  
 dāru 164, 238.  
 dārupās 238.  
 dārus (generous) 73.  
 dāvās 231.  
 dāvijas 328.  
 dāç 61.  
 Dāsapatni 282.  
 dāsas (slave) 234.  
 dāsās 232, 362, 635.  
 dāsējās 635.  
 dīnas 236.  
 div (shine) 62, 236.  
 div (play) 231, 236.  
 div (heaven) 236, 572, 616.  
 divām 236, 572.  
 divasas 236.  
 divjās 236, 518, 616.  
 diç 134.  
 diçā 134.  
 dištām 134.  
 dih 29, 182.  
 dī (hasten) 236.  
 dī (shine) 236, 237, 517, 626.  
 dip 237, 265.  
 dirghās 191, 730.  
 du 231.  
 duā 239.  
 dudh 258.  
 dur- 240.  
 dur 258.  
 durmanās 240.  
 dūrjas 258.  
 dūrjās 258.  
 dush 240, 245.  
 dus- 240.  
 duh 33, 258.  
 duhitár 78, 257, 308, 516.  
 dūrā 328.  
 dūtis 235.  
 dry 134.  
 dryshād 637.  
 dēv 236.  
 dēvarās 231.  
 dēvās 236, 237, 513, 517, 519, 616.  
 dēvā 231, 596.  
 dēhī 182.  
 dō 60.  
 dju (shine) 237.  
 dju (heaven) 572, 616.  
 djut 62, 237.  
 djāus 236, 616.  
 dram 238, 707.  
 drā (sleep) 63, 233.  
 drā (run) 237.  
 drāgh 191.  
 drāghimān 191.  
 drāghijās 191.  
 drāghmān 191.  
 drāpajāmi 238.  
 dru 238.  
 Drupada 641.  
 drumas 238.  
 drus 238.  
 drāi 63.  
 dva 239.  
 dvajās 239.  
 dvār 258.  
 dvāram 78, 79, 258, 516.  
 dvi-, dvitījas 239.  
 dvish 240, 245, 248, 594.  
 dvis 239.  
 dvēshas 245.  
 dvāu 239, 429.  
 dhānam 255.  
 dhānus 255, 256.  
 dhānvan 255.  
 dham 387, 545.  
 dhamānis 387.  
 dhar 192, 257, 726.  
 -dharas 257.  
 dháriman 257.  
 dharōnam 257.  
 dhartár 257.  
 dhármas 257.  
 dharsh 256.  
 dharshas 256.  
 dhavas 36, 517.  
 dhā (suck) 252.  
 dhā (set, do) 254, 415, 520.  
 dhátus 254.  
 dhātí 254.  
 dhātrī 252.  
 dhānas 255.  
 dhāp 513.  
 dhāman 251, 254.  
 dhārús 253.  
 dhāv 256.  
 dhi 484.  
 dhī 254, 517.  
 dhīras 257.  
 dhīs 517.  
 dhur 257.  
 dhúrjas 257.  
 dhū 60, 258.  
 dhūp 60, 228, 259, 512, 527.  
 dhūpanam 228.  
 dhūpas 228.  
 dhūmās 60, 115, 258.  
 dhūr 256.  
 dhūrv 223.  
 dhulis 258.  
 dhūtās 726.  
 dhṛshṭas 256.  
 dhṛshṇús 256.  
 dhénā 484.  
 dhénús 252.  
 dhmā 545.  
 dhjā (dhjāi) 33, 254.  
 dhraç 192.  
 dhraç 257.  
 dhṛāgh 191.  
 dhṛāçis 192.  
 dhṛūtis 223.  
 dhruvās 257.  
 dhvās 546.  
 dhvāsas 546.  
 dhvan 546.  
 dhvar 258, 485.  
 na 317.  
 naç 162.  
 naçukas 162.  
 nak 162.  
 nákis 489.  
 náktam 162, 440.  
 náktis 162, 714.  
 nakhām 321.  
 nakhās 321, 322, 422, 506, 714.  
 natās 320.  
 nath 422.  
 nad 243.  
 nadās 243.  
 nadī 243.  
 nadh 316, 422.  
 nánandar 231.  
 nand 231, 725.  
 nápat 266, 267.  
 náptar 266.  
 náptí 266.  
 nabh 294.  
 nábbhas 294, 423.  
 nabhasjās 294.  
 nabhjām 294.  
 nam 313, 314, 320.  
 námas 314.  
 nar 306.  
 nárakas 309.  
 náras 306.  
 nari 640.  
 nárijas 306.  
 navatí 310.  
 návān 77, 310, 596.  
 navamās 310, 311.  
 návās 315.  
 návishṭhas 316.  
 návjas 315, 316.  
 naç 162, 308, 309.  
 nas (collect oneself) 314.  
 nas (nos) 320.  
 nah 316.  
 nā (non) 317.  
 nább 294.  
 nábbhis 294, 322.  
 nábbhilam 294.  
 náma 321.  
 náma(n) 321.  
 náças 162.  
 náshṭrá 162.  
 náśā 319.  
 ni- 33, 309, 315.  
 nig 317, 480, 671.  
 niñç 317.  
 niñjās 309.  
 ni-drā 233.  
 ni-dhānas 255.  
 ni-bandh 261.  
 ni-majas 324.  
 nir-bandh 261.  
 niç 163.  
 niçā 163, 440.  
 ni-çrajani 150.  
 nis- 306.  
 ni-sṭhan 213.  
 niçās 315.  
 niças 315.  
 nihārās 294.  
 nu, nū (nunc) 318.

- nu (go) 318.  
 nūtnas 318, 385.  
 nūtnas 318.  
 nūnām 318.  
 nūtnas 307.  
 nūmām 306.  
 nēd 317.  
 nō 317.  
 nāu 320.  
 nāukā 313.  
 nāus 313.  
 nūbgas 529.  
  
 p for k(?) 468.  
 paktis 465.  
 pakvās 465.  
 pak 64, 465.  
 pagrās 267, 268.  
 pañkathās 464.  
 pañkan 464.  
 pap 273.  
 paṇas 273, 274.  
 pānjas 273.  
 pat 106, 210, 606.  
 pāttram 210, 709.  
 pātis 282.  
 pattis 245.  
 pāttram 210, 211, 709.  
 patrin 210.  
 pātnī 282, 653.  
 pātman 210.  
 patram 709.  
 pathās 270.  
 pad (tread) 114, 245.  
 pad (foot) 245.  
 padām 79, 114, 245.  
 padātis 245.  
 panthan 270.  
 par (fill) 73, 277, 282, 554.  
 par (conduct) 272.  
 par (occupy) 273.  
 paratās 268.  
 param 268, 269, 273.  
 paramās 273.  
 paraçus 164, 730.  
 páras 269, 273, 275.  
 pára 268, 269.  
 parā-i 269.  
 parā-dā 269.  
 pári 268, 274.  
 pari-di 236.  
 pariparin 278.  
 pari-laghus 274.  
 pari-vēda 274.  
 parut 275.  
 paruttnās 275.  
 parē 268, 269.  
 pārēṇa 268, 269.  
  
 parē-djavi 273.  
 park 165, 166.  
 parth 211.  
 pard 246.  
 pardanam 246.  
 pardas 246.  
 parj-asti 274.  
 parsh 275.  
 pālās 288.  
 palāvas 288.  
 palitās 271.  
 palvalās 275.  
 pāvanam 498.  
 pavīs 268.  
 paviram 268.  
 pāvirus 268.  
 paç 100, 267, 429, 534, 676.  
 paçus 268.  
 paçkas 716.  
 paçkimās 716.  
 pas 272.  
 pásas 272.  
 pā (nourish, protect) 269, 270, 281, 282.  
 pā (drink) 280.  
 pākās 465.  
 pāñs 268.  
 pātas 210.  
 pāttram 280, 508.  
 pātham 270.  
 pāthas 270.  
 pāthis 270.  
 pād 245.  
 pādas 245.  
 pādukas 245.  
 pānam 280.  
 pāpas 33.  
 pājús 281, 395.  
 pāram 273.  
 pāras 273.  
 pārshnis 498.  
 pālavi 271, 63.  
 pālās 282.  
 pālīs 374.  
 pāvakās 286.  
 pāças 267.  
 pāshānās 439.  
 pi 264, 391, 465.  
 piKKhā 164.  
 piñg 32, 35, 165.  
 piñgaras 32.  
 pitā 269, 440.  
 pitubhāg 297.  
 pītryjas 270.  
 pītrjas 270, 636.  
 pinv 164, 276.  
 pipāsā 79.  
 pippalas 511.  
 piv 164.  
 piç 164.  
  
 piçumas 164.  
 pi-h 276, 498, 665.  
 piṣṭikā 276.  
 pī 276.  
 pītadārus 164.  
 pītas 280.  
 pītudārus 164.  
 pīthās 655.  
 pīnas 276.  
 pīvan 276.  
 pīvarās 276, 508.  
 pīvari 276.  
 pīvas 276.  
 pūñgas 286.  
 puñdarikas 438.  
 putrās 287.  
 pupphulas 509.  
 pupphusas 509.  
 pūmans 287.  
 pur 281.  
 pūram 281.  
 purās 269, 440, 634.  
 pūrā 269.  
 purīs 79, 281.  
 puri 281.  
 purūs 277, 281.  
 pul 277.  
 pulakas 374.  
 pulas 281.  
 pulus 277, 281.  
 push 287 (bis), 472.  
 pū 286, 498.  
 pūgas 286.  
 pūti 286.  
 pūtikas 286.  
 pūtis 286.  
 pūtudārus 164.  
 pūjas 286.  
 pūjāmi 63, 286.  
 pūrnās 277.  
 pūrvas 284.  
 pūl 277.  
 pūktis 165.  
 pūthukas 282.  
 pūthūs 211, 278, 506.  
 pūçnis 274.  
 pūshatās 275.  
 pūshatī 275.  
 pūshant 275.  
 pūçalās 164.  
 pūças 164, 165.  
 pūçaskāri 165.  
 pūtakas 287.  
 pūtas 287.  
 pūrastjās 634.  
 pra- 284, 386, 479.  
 praçnus 180, 522.  
 prāti 284, 285.  
 prati-vadh 260.  
 prath 211, 278, 506.  
 prathamās 73, 284, 445.  
  
 prāthas 278.  
 prāthijās 278.  
 prathukas 282.  
 pra-dhanas 255.  
 pra-pat 106, 210.  
 pra-bhū 541.  
 pra-manthas 335.  
 pra-mināmi 335.  
 pra-mṛṇāmi 327.  
 prajas 479.  
 prājastās 377.  
 pra-ju 626.  
 pra-li 366.  
 pra-vad 110.  
 pravandās 284.  
 praçnas 165.  
 pra-sūnam 373.  
 pra-skand 166.  
 pra-stump 227, 695.  
 prānas 277.  
 prātār 284.  
 prāsakas 210.  
 prijās 283.  
 pri 283.  
 pritis 283.  
 pru 279.  
 prush 283, 286, 303, 509.  
 prēmān 283.  
 plavās 47, 279.  
 plihan, plihān 288.  
 plihā 288, 692.  
 plu 279.  
 plush 283, 287, 509.  
  
 ph 506.  
 phal 301.  
 phālam (fruit) 301.  
 phalam (plough-share) 301.  
 phālas 301.  
 phut 509.  
 phull 301, 506.  
 phullas 301.  
  
 badh 255, 701.  
 bandh 261.  
 bandhakas 261.  
 bāndhanam 261.  
 bandhās 261.  
 bandhutā 261.  
 bāndhus 261.  
 babhrūs 303, 304.  
 barbarās 290, 291.  
 barh 291, 714.  
 bālam 594.  
 bālīshthas 594.  
 bād 255, 272, 701.  
 bāhas 195.  
 bāhūs 195.  
 buddhis 262.



- budh 261.  
 budhnās 262, 527.  
 bhaktām 297.  
 bhaktās 189.  
 bhaksh 28, 297.  
 bhāgas 297.  
 bhaṅgis 542.  
 bhaṅ 28, 40 f., 114, 171, 188, 297.  
 bhaṅg 542.  
 bhan 64, 296.  
 bhadrās 657.  
 bhan 64, 296.  
 bhajām 298.  
 bhar 34, 52, 299, 300, 554.  
 bharayam 299.  
 bhāras 299.  
 bhārgas 188.  
 bharṅ 188.  
 bhārṭṭ 303.  
 bhārma(n) 299.  
 bhāvat 304.  
 bhavās 304.  
 bhas 296, 696.  
 bhasanas 699.  
 bhasād 637.  
 bhāstrā 509.  
 bhā 64, 65, 172, 296.  
 bhāganam 189.  
 bhāgās 114.  
 bhānūs 296.  
 bhāmas 296.  
 bhārās 52, 299.  
 bhālam 297.  
 bhāvās 304.  
 bhāsh 296, 361.  
 bhās 296.  
 bhāsada 637.  
 bhāsas 296.  
 bhishakti 34.  
 bhishag 34.  
 bhī 298, 640.  
 bhīmās 298.  
 bhīs 298.  
 bhugnas 189, 525.  
 bhug 189, 525.  
 bhūgas 189.  
 bhūgjus 395.  
 bhur 303.  
 bhurag 301.  
 bhurig 298.  
 bhū 304, 505, 570, 640, 649, 680.  
 bhū (earth) 262.  
 bhūtās 304.  
 bhūmās 304.  
 bhūtās 299.  
 bhṛgas 302.  
 bhrshās 722.  
 bhṛshagām 34.  
 bhōgās 189.  
 bhrag 188.  
 bhrām 337, 530.  
 bhrāṅ (shine) 33, 40, 188, 449.  
 bhrāṅ (brightness) 188.  
 bhrātā 302.  
 bhrāṅ 188.  
 -bhruva 295.  
 bhrū 295, 720.  
 ma 327.  
 mgh 334.  
 māksas 337.  
 mak 325.  
 mañk 325.  
 matas 311.  
 matis 103, 311.  
 mattas 326.  
 math 335.  
 mathanam 335.  
 mad (be drunk) 326, 522.  
 mādas 326.  
 madījas 635.  
 mādhu 260, 330.  
 mādhus 260.  
 madhjamās 332.  
 mādhyas 332, 447, 662, 680.  
 man 63, 103, 311.  
 mānas 103, 311.  
 manāk 335.  
 mānus 103, 313.  
 mauth, 63, 335.  
 manthās 335, 506.  
 manjās 103, 311.  
 mar (die) 331, 337.  
 mar (maim) 327, 337.  
 marakatam 537.  
 maraktam 537.  
 marās 331.  
 marājus 331.  
 marūt 332.  
 marūs 332.  
 marṅ 87, 184 (bis).  
 marṅ 329.  
 marṅ 327.  
 mard (crush) 230, 243, 326, 522, 692.  
 mārman 595.  
 marmaras 336, 714.  
 marjakās 594.  
 mārjas 594.  
 marṅ 463.  
 marṅanam 463.  
 malanam 337.  
 mālam 370.  
 malas 370.  
 malinās 370.  
 mav 336.  
 mah 328, 334.  
 mahat 328, 526.  
 mahān 333.  
 mahānt 328.  
 mahās 328.  
 māhas 333.  
 mahā 328.  
 mā (measure) 65, 67, 243, 327, 333.  
 mā (change) 324, 327, 333.  
 mā (m) 332.  
 māksis 489.  
 mātar (knife) 327, 333.  
 mātā (mater) 333.  
 mātram 327, 328.  
 mātrā 327.  
 mānam 327.  
 mānas 327.  
 māris 331.  
 māś 333.  
 māsas 333.  
 māh 328.  
 mī (fasten) 324.  
 mī (lessen) 334.  
 miksh 334.  
 miṇmīpas 335.  
 mīt 324.  
 mithās 209.  
 mithu 209.  
 mithunās 209.  
 mid 336, 718.  
 mindā 335.  
 mi-miksh 334.  
 miṅ 444.  
 miṅmājāmi 334.  
 miṅrās 334.  
 mīh 194.  
 mīras 332.  
 mīv 324.  
 mu 336.  
 muk 162.  
 mush 336, 338.  
 mushkās 338.  
 mushṭi 286.  
 mū 336.  
 mūkas 336.  
 mūtas 336.  
 mūrās 338.  
 mūsh 338.  
 mūshakas 338.  
 mūshas 338.  
 mūshikas 338.  
 mūtās 331.  
 mūtis 331.  
 mūtjas 331.  
 mūdutā 230.  
 mūdās 113, 230, 326.  
 mūmāras 567.  
 mṛlāmī 329.  
 mṛlikam 329.  
 mṛshās 87.  
 mēghās 194.  
 mēdas 336.  
 mēhanam 195.  
 mēhas 194.  
 mōkshayam 162.  
 mōkanam 162.  
 mnā 311.  
 mrad 352.  
 mlā, mlāi 326, 332, 538, 555.  
 jakṛt 27, 72, 461.  
 jag 40 f., 170, 171.  
 jagas 171.  
 jāgus 171.  
 jagñās 171.  
 jagñas 171.  
 jat 396, 605, 625 (bis), 626, 723.  
 jantā 545.  
 jam 313, 378, 545, 614, 625.  
 jāmas 545.  
 javanās 606.  
 jāvas 625.  
 jāvasam 625.  
 jāvijās 589, 633.  
 jācas 134.  
 jas (ś) 25, 396, 397, 603, 687.  
 jas (ś) 377, 625.  
 jasmāt 594.  
 jā 605, 607.  
 jāk 626.  
 jākkhrēshthā 603.  
 jāṭ 396, 397, 603.  
 jātar 308.  
 jātanam 625.  
 jātanā 625.  
 jātr 308, 317.  
 jāmatār 308.  
 jāvat 397, 594.  
 ju (mix up) 62, 626, 627.  
 ju (defend) 63, 397.  
 juktās 87.  
 jugām 182, 612, 626, 636.  
 jūgjam 182.  
 jūg 54, 62, 68, 87, 182.  
 judh 62, 397.  
 judhmās 62, 67, 397.  
 jūvan 231, 588, 589.  
 jushmē 397.  
 jūsham 626.  
 jūshas 626.  
 jūś 626.

- r far more frequent than 1 449.  
 rāh 192.  
 rakṣas 186.  
 rakṣh 28, 64, 132, 133, 185, 382, 729.  
 rakṣhakas 382.  
 rākṣhaṇam 382.  
 rakṣhas 382.  
 raghūś 192.  
 rag 720.  
 rāṅakas 186.  
 ragatām 172.  
 ragatās 172.  
 ragani 480.  
 rāgas 173, 480.  
 raṅg 186.  
 ratas 325.  
 rātis 325.  
 rāthas 343.  
 ran 325.  
 rabh 292.  
 ram 325.  
 rāmanas 325.  
 ramās 325.  
 rāvas 356.  
 rā (roar) 657.  
 rāgas 186.  
 rāgh 190.  
 rāḡ 40, 137, 172, 185.  
 rāḡan 185.  
 rād 720.  
 rāma 325.  
 riktas 462.  
 rikh (Ved.) 724.  
 rik 462.  
 rip (Ved.) 266.  
 riḡ 133, 371.  
 riḥ 194.  
 ri 366.  
 ru 356.  
 rukmās 160.  
 ruk 160, 449.  
 ruḡ 183.  
 rūḡā 183.  
 rudh 352, 362.  
 rudhirās 252, 447.  
 rush 553, 665, 666.  
 ruh 29, 352, 362.  
 rūpājāmi 29.  
 rōhitas 252.  
 laksh 365.  
 lākeṣman 365.  
 lāghishthas 192.  
 lāghija(n)s 192.  
 laghūś 87, 192, 475.  
 laṅgh 183, 526.  
 laṅḡā 183.  
 lap 160, 554.  
 labh 292, 531, 532.  
 lamb 369.  
 lāmbhjas 532.  
 lavitram 368.  
 lash 361.  
 las 361.  
 lābhas 531.  
 lālasas 361.  
 lip 266.  
 līpis 642.  
 liḡ 371, 534.  
 lih 194.  
 li 336.  
 luṅk 349.  
 lup 183, 263, 266.  
 luptās 266.  
 lubdhas 367.  
 lubh 367.  
 lū 368, 554.  
 lēpanam 266.  
 lēpas 266.  
 lēcas 371.  
 lōk 160.  
 lōk 113, 160.  
 lōkanam 160.  
 lōpākas 357.  
 lōpācās 357.  
 lōbhas 367.  
 vaksh 28, 64, 383, 579.  
 vākṣhaṇas 383.  
 vāk 459.  
 vākānam 459.  
 vākas 459.  
 vaḡ 187.  
 vatsakās 208.  
 vatsatarās 208.  
 vatsarās 208.  
 vatsās (year) 208.  
 vatsās (calf) 208, 712.  
 vad 248, 324, 523, 589.  
 vadh 260, 701.  
 vādhar 260.  
 van 565, 637, 702.  
 vanād 637.  
 vāndē 248.  
 vabh 60, 295.  
 vam 324, 337.  
 vamathus 324, 325.  
 vamanam 324.  
 vamis 324.  
 vamrās 337.  
 vājas (birds) 391.  
 vājas (strength) 389.  
 vajā (twig) 389.  
 var (cover) 114, 344, 359.  
 var (wish) 549.  
 var (enclose) 550.  
 varapās 550.  
 vāras (breadth) 346.  
 vāras (wish) 549, 550, 594.  
 vāras (circle) 358.  
 varās (choosing) 549.  
 vārījas 71, 346.  
 varū 71, 239.  
 Vārūnas 348, 350, 583.  
 varūtram 359.  
 varḡ 181, 351.  
 vārṇas 114.  
 vart 349.  
 vartakas 349.  
 vartakā 349.  
 vartakī 349.  
 vārtikā 349, 534.  
 vārtulas 349.  
 vardh 549, 588.  
 vārpas 593.  
 varsh 191, 342, 345, 350.  
 varshām 345.  
 varshās 345, 578.  
 varshman 348.  
 vārshījas 348.  
 varh 291.  
 val 358.  
 valajas 358.  
 valmīkas 337.  
 vaḡ 136.  
 vācas 136.  
 vaḡā 136, 593.  
 vas (clothe) 22, 42, 376.  
 vas (dwell) 33, 79, 206, 377, 378, 586.  
 vas (give light) 42, 207, 399, 595.  
 vas (vos) 601.  
 vasatis 377.  
 vāsanam 376.  
 vasantās 42, 388.  
 vasas 207.  
 vāstram 376.  
 vasnām 322.  
 vasnās 322.  
 vāsman 376.  
 vasram 387.  
 vah 33, 106, 192.  
 vahanījas 664.  
 vā (weave) 60, 390.  
 vā (blow) 248, 387.  
 vā (or) 442.  
 vāḡjam 459, 460.  
 vāḡhāt 702.  
 vāk 376, 459.  
 vāḡ 187.  
 vāḡas 187.  
 vāḡin 187.  
 vāṅkh 702.  
 vātas 387.  
 vādas 248.  
 vādh 260.  
 vājūs 387.  
 vāras (time) 356.  
 vāras (multitude) 550.  
 vāras (defence) 550.  
 vāri 350.  
 vāsarās 388, 399, 401.  
 vāstavjās 206.  
 vāstu 79, 206.  
 vāhanam 192.  
 vāhās 192.  
 vāhini 192, 193.  
 vi- 33, 36, 37, 239.  
 viḡatī 135, 429.  
 vi-gal 474.  
 vik 135.  
 vi-ḡāmān 547.  
 vi-ḡāmīn 547.  
 vi-ḡnā 37.  
 vid 242.  
 vi-das 234.  
 vidjā 242.  
 vidvās 566.  
 vidh (vindh) 36, 580.  
 vidhavā 36.  
 vind 54, 101, 242.  
 vijatis 391.  
 vi-jā 37.  
 vi-ru 356.  
 vilishtas 371.  
 vi-li 366.  
 vi-vā 37.  
 vi-vid 242.  
 vīvidishati 242.  
 viḡ (step in) 138, 163.  
 viḡ (dwelling) 163.  
 viḡas 163.  
 viḡpātis 163.  
 vish (work) 389 (bis).  
 vishapushpam 388.  
 vishām 388, 389.  
 vishās 389.  
 vishu 378.  
 vishuvānt 378.  
 vishuvam 378.  
 vis 391.  
 vi-sphāritam 288.  
 vi-sphūṅg 186.  
 vi-hā 196.  
 vihājas 196.  
 vi 33, 390, 581, 605.



- vīṭikā 389.  
 virās 307, 589.  
 vīkas 78, 84, 161, 596.  
 vṛṅānam 181.  
 vṛṅinās 181, 480.  
 vṛddhās 549.  
 vṛdh 33, 352.  
 vṛshan 345.  
 vṛshabhās 360.  
 vṛshas 345.  
 vē 60.  
 vētasās 389.  
 vētrās 389.  
 vēda, vēdmī 101, 242.  
 vēdas 242.  
 vēnās 390.  
 vēnis 390.  
 vēcās 163.  
 vēcman 163.  
 vēcjam 163.  
 vjā 390.  
 vj-ā-naçis 308.  
 vj-ā-pāras 273.  
 Vjāsa 608.  
 vra 550.  
 vraḡ 181.  
 vraḡās 181.  
 vrapām 372.  
 vratām 549, 580, 587.  
 vrad 352.  
 vraçk 160, 161.  
 vrātas 550.  
 vrādhant 549.  
 vrihis 575.  
 ç for s 136.  
 çākan 139.  
 çākṛt 139, 167.  
 çakṛm-mūtram 162.  
 çāṅk 708.  
 çāṅkā 708.  
 çāṅkhām 152.  
 çāṅkhās 82, 152, 504, 506.  
 çapās 141.  
 çatām 53, 84, 135.  
 çad 138.  
 çam 105.  
 çar 738.  
 çarād 637.  
 çarās 139.  
 çarkarā 144.  
 çalās 139.  
 çalākas 139.  
 çaljam 148.  
 çāvas 158 (bis).  
 çā 149.  
 çānas 159.  
 çālā 140.  
 çī (sharpen) 149.  
 çir 147.  
 çiras 142.  
 çicus 7, 158.  
 çī (lie) 145.  
 çirshām 142, 143.  
 çuā 565.  
 çuk 145.  
 çuddhās 138.  
 çudh 138, 440.  
 çūptis 529.  
 çubh 145.  
 çush 145, 393.  
 çushis 159.  
 çūshkas 393.  
 çūnam 157.  
 çūnās 157.  
 çūnjās 146, 147, 519, 609, 632.  
 çūratā 158.  
 çūras 158 (bis).  
 çūrgam 147.  
 çēvas 145.  
 çōkarugnas 183.  
 çōpas 145.  
 çkandras 522.  
 çnath 737.  
 çjāmās 546, 612.  
 çjālas 173.  
 çjēnās 723.  
 çrad-dhā 254.  
 çrāvas 151.  
 çravasjām 151.  
 çrā 147.  
 çri 150.  
 çritās 150.  
 çri 147.  
 çru 151, 554.  
 çrutās 151.  
 çrudhī 151.  
 çrush 151.  
 çrushī 151.  
 çrōpis 150, 554.  
 çvan 76, 159, 443, 565.  
 çvāçuras 28, 136, 431.  
 çvagrū 136.  
 çvā 157.  
 shash 384.  
 shashthās 384.  
 shōda 244.  
 shṭiv, shṭiv 285, 372, 697.  
 sa 25, 394.  
 sa- 33, 392, 685.  
 sakṛt 392.  
 sāgarbhjas 392, 478.  
 sa-gha 526.  
 sak 460.  
 sakivas 460.  
 sat 207, 375, 376.  
 sattvām 207, 376.  
 satjām 207.  
 satjās 207, 376, 517, 610, 685.  
 sad (sit) 240.  
 sad (reach) 241, 685.  
 sādās 240, 283.  
 sādaspatis 283.  
 sadras 241.  
 sanakās 311.  
 sāna-s 311.  
 san-as 311.  
 sāuā 311.  
 sani-tūs, tur 685.  
 sap 460, 541.  
 saptām 265.  
 saptamās 265.  
 sam 33, 392, 685.  
 samām 322.  
 samās (just) 322.  
 samās (every) 323.  
 samā (āma) 322.  
 sāmā (summer) 546.  
 sam-nas 314.  
 sam-vat 208.  
 sar 347, 353, 548.  
 saranyūs 344.  
 Saranyūs 344, 685.  
 surat 353.  
 Sarāmā 347.  
 sarās (fluid) 347.  
 sarās (salt) 548.  
 sarit (river) 347.  
 sarg 381.  
 sar 265.  
 sarpās 265.  
 sārmas 347.  
 sārvas 372, 551, 681, 682, 685.  
 salilām 372, 549.  
 salilās 548.  
 savjās 166.  
 sasā 625.  
 sasjām 625, 659.  
 sah 191, 193.  
 saha 618.  
 sahanas 193.  
 sāhas 193.  
 sahasra 392, 712.  
 sāhuris 193.  
 sāhjam 378.  
 sāhjas 378.  
 sākām 544.  
 sādhus 241.  
 sāmi 325.  
 Sāramejās 347.  
 sārās, sārās 349.  
 si 394.  
 sīk 137.  
 siv 381.  
 simān 394.  
 simāntas 394.  
 su- (ē) 33, 36, 244, 375, 376.  
 su, sū (beget) 373, 382, 395.  
 su (press out) 372, 395.  
 sutas 395.  
 sup 187.  
 suptās 289.  
 sūkarās 382.  
 sūnus 320, 395, 654.  
 sūmām 395.  
 sūras 551.  
 sūrjas 551.  
 sēkas 137.  
 sēktar 137.  
 sēkanan 137.  
 sēv 481.  
 skand 166, 523.  
 skabh 167, 525.  
 skambh 167.  
 sku 114, 169.  
 skhad 246, 506.  
 skhal 373, 697.  
 stan 40, 213, 217.  
 stabdhās 219.  
 stabh 61, 215, 504.  
 stambās 528.  
 stambh (set fast) 212, 219, 528, 695.  
 stambhas (post) 212.  
 stambhas (torpor) 219.  
 star 206, 215.  
 staras (stellae) 206.  
 staras (stramen) 215.  
 starimān 215.  
 starī 213.  
 starjam 213.  
 stigh 195.  
 stibhis 213.  
 stīrnām 214.  
 stu 215, 216.  
 stupās 216.  
 stūpās 216.  
 stfbbhis 206, 429.  
 stēnās 213.  
 stējām 213.  
 sthag 186, 504, 695.  
 sthaganam 186.  
 sthal 212.  
 sthālam 212.  
 sthāvīras 218.  
 sthāvis 211.  
 sthā 60, 65, 211, 504, 506.

sthāp 60, 214, 695.	sphur 287, 373.	svar (shine) 373,	hāritas 198, 202.
sthājam 648.	sphuraṇam 287.	551.	hāris 198, 202, 555.
sthāvaras 212.	sphuras 287.	svar (sound) 287,	harjatās 198.
sthātis 211, 440.	sphūrg 186.	354.	harmutās 199.
sthīras 213.	smat 209.	svaras 354.	harsh 198.
sthūpā 212, 216.	smājam 328, 656.	svas 393.	hāstas 196, 660.
sthūras (thick) 216,	smar 103, 330.	svāsar 354, 636.	hā 196, 200, 526.
218.	smaraṇam 103, 330.	sva-staras 215.	hānis 200.
sthūras (taurus) 218,	smarās 330.	svastis 375.	hārdi 143.
695.	smi 328, 656.	svastījas 636, 646.	himām 201.
sthūlās 216, 218.	smitām 328.	svād 33.	himās 201.
snavas 319.	smṛtis 103, 330.	svādas 229.	himā 201.
snā 319.	smērās 329.	svādūs 229.	himāni 201.
snājus 316.	sjālās 173.	svīd 242, 607.	hiraṇam 204, 440.
snāvan 316.	sjūtās 381.	svījas 635.	hiraṇjam 204.
smih 318.	sjūtis 381.	svēdani 246, 695.	hirā 203.
smu 319.	sjūman 381.	svēdas 242.	hu 205, 259.
smutas 319.	srāvanti 352.	h from dh 259.	hṛd 143, 554.
smushā 33, 319.	sravas 352.	ha 526.	hṛdajam 143.
snēhas 318.	srū 352, 353, 692.	hāsas 200.	hēman 201.
spand 247, 503.	srutis 353.	hāsi 200.	hēmantas 201.
spandas 247.	srōtas 352.	had 199.	hjas 201, 499, 675.
sparç 275, 707.	sva- 393, 595, 601,	han 255.	hjaastanas 201.
sparh 195.	635.	hānus 307, 525.	hradās 197.
sparç (see) 168,	svad 229.	har (delight oneself)	hradini 197.
432.	svadhā 251.	198.	hras 199.
sparç (bind) 701.	svan 141, 630.	har (grasp) 198,	hrasījas 199.
sparças 100, 168,	svana 630.	199.	hrasvā 199.
429.	svap 61, 248, 289,	har (be angry) 198.	hrād 197.
sprhā 195.	379.	hāraṇam 199.	hrādūni 197.
sphar 287, 504.	svāpnas 136, 289.	harinās 202.	hrikus 197.
sphal 373, 504, 506,	svajām 393.	harit 121, 202.	hlād 202.
697.	svar (heaven) 551,	harit 198.	hlādas 202.
sphik 699, 722.	727.		hlikus 197.



## V. IRANIAN INDEX.

(Zend undistinguished. Old Persian in brackets. Modern Persian with an asterisk.)

a- 306.	açpya 462.	kaēna 472, 488.	ghena 175.
āzañh 190.	açman 131.	katāra 466.	jam 473.
aéva 40, 320, 739.	ash 384.	kamara 140.	jah 476.
aiti 207.	ashi 463.	kameredha 141.	ji 476.
ainika 305.	astan 163.	kar 148.	jī 476, 491.
aipi 264.	astama 163.	kareta 148.	jiv 476.
aibi 293.	*asparag 503.	karesh 488.	jivya 476.
airima 325.	ahmi 375.	kō 466.	jya 477.
airya 339.	āyu 385.		
aiwi 293.	āh 377.	qa 393.	(zanak 679.)
aojañh 187.		qañhare 430.	
añhu 375.	i 401.	qap 289.	zairi 202.
aka 130.	ir 346.	qafna 289.	zairina 202.
akhsh 463.	irith 366, 721.	qaretha 551.	zaothra 205.
aghana 190.	ish 402.	qarenañh 551.	zaurva 176.
aghru 613.	ishu 402.	qagura 136.	zad 199.
az 170.		qēng 116.	zan (beget) 175.
azra 170.	(u 244.)		zan (recognize) 178.
azhi 193.	udra 248.	khumba 158.	zarahh 199.
an- 306.	upa 290.	khūrā 156.	zaraz-dā 199.
ana- 306.	upairi 289.	khshatra-pā 722.	zarānu 204.
ana (prep.) 306.	upaman 103, 311.	khshatra-pāvan 722.	zaranya 204, 440.
anazātha 306.	upara 290.	khshap 705.	zaredhaja 143.
anuçañt 136.	uba 293.	khshapan 705.	zaçta 660.
anya 310.	uru 346.	khshar 705.	zīm 201.
ap 469.	u-rud 721.	khshi (dwell) 157.	zima 201.
apa 263.	ush 398.	khshi (spoil) 705.	zem (zāo) 197.
apana 263.	usha 400.	khshvas 384.	zyāo 201, 202.
apara 263.	ushañh 400.		zrād 197.
apa-var 550.	ūra 740.	gaēth 473.	zrvan 200.
(abish 293.)		gam 473.	zrvāna 200.
ayare 401.	ereghañt 192.	gar (praise) 177.	zhnu (plur. zanva)
ar 339.	erezata 172.	gar (wake) 180.	179.
arej 190.	erezu 185.	gar (honour) 176.	
arejañh 190.	erethé 339.	garahh 176.	taurvajēiti 227.
areta 339.	*ēnder 315.	garema 493.	tañcista 507.
ared 250.		garew 492.	tac 218, 507.
arshan 342.	ca 487.	garewa 478.	taka 507.
av 386.	cathware 488.	(garb 492.)	takhma 507.
avi-çpāç 701.	carāna 470.	(garmapada 493.)	(takhsh 219.)
açta 209.	ci 488.	gū 473.	tan 217.
açtar 206.	citha 488.	guz 259.	tanya 217.
açti (bone) 209.	cithi 488.	grantō 203.	(tafedhra 502.)
açti (est) 375.	cinem 489.		(tafnu 502.)
(açpa 78.)	cisca 489.		tareç 225.
açpō 462.	cvañt 466, 467.	gh 125.	

- tarep 224.  
 tarò 222.  
 tarshna 224.  
 tarsti 225.  
 tavan 226.  
 tash 219.  
 tasha 219.  
 tasta 219, 220, 224.  
 tighra 214.  
 taghri 214.  
 tu 226.  
 tuc 219.  
 tûm 219.  
 temañh 545.  
 temañha 545.  
  
 thräf 224.  
 thräfañh 224.  
 thraota 353.  
 thri 226.  
 thritya 226.  
 thrishva 325.  
 thris 226.  
 thru 353.  
 thwa 219.  
  
 da 233.  
 daenu 252.  
 daéva 236.  
 dañgra 230.  
 dañh 230.  
 dañhista 230.  
 dañhupañti 283.  
 dakhsh 230.  
 dañtan 244.  
 dar (cut) 235.  
 dar (hold) 257.  
 dareghò 191.  
 darez 192, 257.  
 daresh 256.  
 (daçta 660.)  
 dashina 235.  
 dâ (set, make) 254.  
 dâ (give) 237.  
 dâuru 238.  
 dâtan 254.  
 dâtar, dâta 237.  
 dâthra 237.  
 dâna 237.  
 dâman 254.  
 dâmi 254.  
 diz 182.  
 div 236.  
 didañhê 230.  
 du 254.  
 dughdhar 258.  
 dunman 258.  
 dush 240.  
 dushiti 240.  
 dus-manañh 240.  
 dema 234.  
 derezra 257.  
  
 dévò-dbi 663.  
 \*deçt 660.  
 dru 238.  
 dva 239.  
 dvaéthha 663.  
 dvar 256.  
 dvarem 258.  
  
 dh 125.  
 dharshi 256.  
  
 na 317.  
 nâman 321.  
 nairya 307.  
 nakhturu, nakhturu  
 162.  
 nad 725.  
 napat 266.  
 naptar 266.  
 napti 266.  
 naptya 266.  
 nar 307.  
 nara 307.  
 nava 315.  
 navan 310.  
 naçista 162.  
 naçu 162.  
 nâvi 313.  
 (ni-pis 165.)  
 nimata 314.  
 nû 318.  
 nemañh 314.  
 nô 320.  
  
 paçcañh 165.  
 pañti 285.  
 pañri 274.  
 pañcan 464.  
 pac 465.  
 (patij 285.)  
 (patish 285.)  
 path 270.  
 pathan 270.  
 pathana 211.  
 pad 245.  
 padha 245.  
 par (bring over) 272.  
 par (fill up) 277.  
 para 268, 269.  
 (parus 281.)  
 paresh 275.  
 parê 269.  
 parò 269.  
 paç 267.  
 paçca 716.  
 paçné 716.  
 pâyu 281.  
 pita 269.  
 pivañh 276.  
 piça 165.  
 pukhdha 464.  
 pû 286.  
  
 pûiti 286.  
 perena 277.  
  
 fra-, frâ 284.  
 (fra 501.)  
 frathañh 278.  
 framan 103, 311.  
 frashnu 180, 522.  
 fri 283.  
 frya 283.  
  
 baëshaza 34.  
 bakhsh 297.  
 (baga 297.)  
 baghas 297.  
 baz 297.  
 bañd 261.  
 bañda 261.  
 bar (cut) 298.  
 bar (bear) 299.  
 barbar (Pers.) 291.  
 bâzu 195.  
 bânu 296.  
 bâma 296.  
 bi- 239.  
 bitya 239.  
 \*biring 575.  
 bi 298.  
 bud 262.  
 buna 262.  
 bû 304.  
 brâtar 302.  
 brvaç 295.  
  
 ma 327.  
 maidhya 332, 680.  
 maori 337.  
 makhshi 337.  
 maga 328.  
 mazañt 328.  
 maç 209.  
 maç 243, 311.  
 madh 243, 311.  
 madhas 243, 311.  
 madhu 260.  
 madhema 332.  
 man 311.  
 manañh 311.  
 mar (remember) 330.  
 mar (die) 331.  
 marez 184.  
 mareta 331.  
 maretan 331, 594.  
 maret 330.  
 mared 243, 326.  
 maçañh 161.  
 maçita 161.  
 mâ (measure, v.) 327.  
 mâ (measure, sbst.)  
 327.  
 mâ (negat.) 332.  
 mâoñh 333.  
  
 mâoñha 333.  
 mâcis 489.  
 mâts 333.  
 miz 195.  
 mizdha 89, 260.  
 myazda 260.  
  
 ya 396.  
 yaz 171.  
 yazu 171.  
 yava 625.  
 yavan 589.  
 yâoñh 627.  
 yâre 355.  
 yâçtò 627.  
 yuj 182.  
 yud 397.  
 yévin 625.  
  
 raokshna 161.  
 rap 265.  
 ram 325.  
 râma 325.  
 ric (pour out) 266,  
 463.  
 ric (abandon) 462,  
 463.  
 rud 352.  
 rudh 252.  
 ruç 160.  
  
 vaçmen-da 233.  
 vaçti 389.  
 vañh (dwell) 206.  
 vañh (clothe) 376.  
 vañh (givelight) 399.  
 vañhana 376.  
 vañhra 388.  
 vac 459.  
 vacañh 459.  
 vad 260.  
 vadare 260.  
 vam 324.  
 var (choose) 549.  
 var (teach) 343.  
 (var 343.)  
 vara 550.  
 varatha 550.  
 varez 181.  
 vareza 181.  
 vared 549.  
 vareda 549.  
 varena 587.  
 vagtra 376.  
 vâ 387.  
 vâdhay 260.  
 vâra 350, 549.  
 vâreñti 350.  
 verez 181.  
 verezyâmi 181.  
 vehrka 161.  
 vi 391.



viaha 389.	çtaora 218, 567.	çpâ 159, 443.	har (guard) 347,
vi-skâ 146.	çtaman 215.	çpereza 288, 289.	548, 551.
vi-takhti 218.	çtar 215.	çraôni 150.	har (go) 347.
viç 138, 163.	çtare 206.	çru 151, 353.	havja 166.
viçaiti 135.	çtawra 212.	çrva 147.	hita 394.
viçpaiti 163.	çtu 216.	çrvara 147.	hic 137.
vouru 346.	çtûi 216.		hictâmi 211.
vohumad 311.	çtûna 212, 216.	h for s 230.	hu (êð) 244.
çâêtê 145.	çna 316.	haithya 207.	hu (pig) 381.
çatem 84, 135.	çnâd 319.	haurva 551, 681.	hu 395 (bis).
çara 142.	çnâvare 316.	hakeret 392.	hunu 395.
çârañh 142.	çnîzh 318.	hazañh 193.	hu-peretu 272.
çuc 145.	çpar 288.	had 240.	(huwa 393.)
*çucah 141.	çparegha 503, 700,	hadhis 240.	hush 393.
çûra (strong) 158.	722.	hana 311.	*hest 684.
çcid 247.	çparez 195.	haptan 265.	hva 393.
çtairis 215.	çpaç (look) 168.	hama, hâma 322,	hvare 551, 727.
	çpaç (spy) 168.	325.	

## ARMENIAN.

ail 93, 357.	brinz 575.	khirtn 242.	ozni 193.
anwan 321.	ez 93.	kov 93.	quentr 737.
asel 399.	gail 596.	lusin 161.	tagr 596.
at-el 260.	hot 93.	mardo 93.	vard 352.
atsen 93.	hur 286.	mêj 93.	ver 348.
ban 296.	i veroy 348.	orb 294.	

## VI. TEUTONIC INDEX.

(All the branches of the Teutonic family are here united. *c* and *ch* are to be looked for under *k*, High-Germ. *v* under *f*, High-Germ. *w* under *v*.)

- |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|
| aba 263.            | alilanti 357.       | arms 340.           | bar 299.            |
| abraba 510.         | alis 92, 357.       | arn 347.            | bāra 299.           |
| abrs 510, 532.      | aliths 356.         | aro 347.            | barizeins 299, 300. |
| absperren 288.      | alles 357.          | ars 349.            | barki 186.          |
| ād 250.             | alp 292.            | art 341.            | barms 299.          |
| aedm 387.           | alt 356.            | asilus 402.         | barn 299.           |
| af 263.             | āme 323.            | asni 402.           | barr 300.           |
| afar 263.           | ampher 338, 339.    | asts 593.           | bast 261.           |
| agga 130.           | amsa 339.           | ata 240.            | batis 657.          |
| aggvja 190.         | ana 306.            | atbairhtja 188.     | bauains 304.        |
| aggvus 190, 527.    | anabiudan 362.      | āthom 62, 387.      | bauan 304, 596.     |
| Agir 194.           | anbiotan 262.       | atiska 240, 251.    | baūrei 299.         |
| agis 190, 191.      | and 92, 206.        | atta 207.           | baūrgs 302.         |
| aha 464, 469.       | andalauni 363.      | ātum 387.           | baūrtnei 299.       |
| ahana 502.          | andanahti 206.      | at-valvjan 358.     | be- 264.            |
| ahjan 464.          | andavaūrd 206, 343. | augadauro 115.      | beidan 261.         |
| ahsa 383.           | andeis 206.         | augenbrauen 691.    | beidē 293.          |
| ahsala 132.         | andi 206.           | augjan 463.         | beom 304.           |
| ahtau 92, 163.      | ando 305.           | augō 101, 463, 464. | bequem 433.         |
| ahva 119, 410, 469, | āne 306.            | auhsa 187.          | bērc 302.           |
| 470.                | angul 130, 131.     | auka 187.           | bere 299.           |
| ahvatundi 462.      | angust 190.         | au-lamm 391.        | bergen 302.         |
| ainaha 320.         | ancha 592.          | auso 403.           | bérusjōs 299.       |
| ains 320.           | anstrengen 381.     | austr 400.          | besprengen 288.     |
| air 401.            | ansts 305.          | auwi 391.           | bettistreuui 215.   |
| airtha 341.         | anthar 310.         | awa 469.            | bīa 264.            |
| airzjan 556.        | antseffan 512.      | avēthi 391.         | bibēn 298.          |
| aithei 207.         | ānu 306.            | avistr 52, 92, 391. | bibinōn 298.        |
| aiv 385.            | anut 317.           | avō 386.            | biege 189.          |
| aiveys 385.         | ·ar (suffix) 72.    |                     | biene 264.          |
| aivs 385.           | ar 341.             | b MHG. from w 584.  | bigairdan 200.      |
| aka 92, 170.        | ār 342, 554.        | bagms 596.          | bigitan 196.        |
| akrs 171.           | ara 347.            | bahhan 189, 466.    | bilaigōn 194, 425.  |
| achten 464.         | arabeit 292.        | bai 293.            | bileiban 266.       |
| āl 194.             | aram 340.           | baidjan 261.        | bim 304.            |
| alacra 132.         | araweiz 343, 585,   | bajōths 293.        | binda 261.          |
| alah 728.           | 729.                | baīra 299, 554.     | binden 45.          |
| alan 356.           | arbaidjan 292.      | baīrga 302.         | biquāmi 473.        |
| aleina 374, 554.    | arbaiths 292.       | baīrgahei 302.      | biraubōn 263.       |
| alēv 359.           | arbi 294.           | baīrhts 188.        | biru 282.           |
| alēvi fairguni 359. | arbinunja 199.      | baka 189.           | bismaitan 336.      |
| ālf 292.            | arbja 294.          | balgs 496.          | bismer 329.         |
| alhs 132, 728.      | ardhr 341.          | balco 169.          | biuga 189.          |
| alja 357.           | arfaru 272.         | band 45.            | bium 304.           |
| aljan 356.          | arften 523.         | bandi 261.          | blāan 300.          |
| aljar 357.          | arg 192.            | banja 299.          | blās 300.           |
| aljathró 357.       | arjan 341, 554.     | bano 299.           | blāsa 300, 301.     |



- blátara 300.  
blatter 300.  
blázu 291.  
bleiben 34.  
blichu 188.  
bliggvan 485.  
blóðern 301.  
blóma 300.  
blóth 300.  
blóz 300.  
blubbern 301.  
bluojan 300.  
bluot (bloom) 300.  
bluot (blood) 300.  
bodam 262.  
bodig 261.  
bögr 195.  
böce 188.  
bölken 714.  
borian 298.  
botn 262.  
brandr 231.  
braue 295.  
bräutigam 197, 433.  
bräwa 295.  
bregen 531.  
brikan 542.  
bringen 300.  
brim 530.  
brinnan 303, 509.  
brort 722.  
bróthar 303.  
bróthrahans 303.  
bróthralubó 367.  
brukjan 597.  
brún 303.  
brunna(n) 303.  
brunno 303.  
bruodar 303.  
brúthfaths 282.  
bull 301, 302.  
bulla 301.  
bund 45.  
buohha 188.  
buoc 195.  
buochin 188.  
burdi 299.  
  
daddja (lacto) 252.  
daddja (= táju) 624.  
daigs 182.  
damf 502.  
daubs 228.  
daúhtar 258.  
dauns 258.  
daúr 258.  
daúravards 346.  
dēhsa 220.  
dēhsen 220.  
deiga 182.  
deich 183.  
dekju 186, 695.  
  
demar 545.  
dennan 664.  
denu 255.  
derian 494.  
derru 224.  
dlar 517.  
digans 182.  
digju 220.  
dlhsel 220.  
dimpfen 228.  
diubs 513.  
dius 256.  
dolēm 220.  
dōm 254.  
dōms 254.  
dona 217.  
donar 217.  
donen 256.  
dorf 227.  
draga 191.  
drājan 222, 468.  
droenen 257.  
drög 599.  
drum 222.  
drunjus 257.  
dryge 599.  
du 233.  
dubo 228.  
dultu 220.  
dumbs 228.  
dūmo 226.  
dūn 255.  
duncon 219.  
dūne 255.  
dunen 256.  
dunni 217.  
durh 222.  
durchlaucht 618.  
dust 258.  
  
ē OHG. older than  
Goth. i 439 f.  
ealgian 133.  
ealhstede 132.  
ebar 142.  
egg 612.  
eggja 131.  
ēhu 457, 462.  
ei 391.  
eid 740.  
eigir 391, 612.  
eimber 621.  
eir 389.  
Eir 389.  
eira 389.  
eisca 402.  
eiscōn 402.  
eit 250.  
eiten 250.  
eitr 245.  
eiz 245.  
elaho 133.  
  
e-lamm 391.  
Elba 292.  
Elbe 292.  
elbiz 292.  
Elfe 292.  
elgr 132.  
elilente 357.  
elina 374.  
elinbogo 189.  
elles 357.  
empfangen 115.  
empfinden 99.  
eofor 142.  
eppes 457, 483.  
er 384.  
erbiz 585.  
erbse 585.  
errau 341.  
ersticken 215, 700.  
erwet 343.  
esza 250.  
ēwa 385.  
  
fadam 211, 217,  
448.  
fadar 269, 440.  
faden 448.  
fadhu 270.  
fagrs 267.  
fah 267.  
fahan 114, 267.  
fahs 164.  
faihu 268.  
fahugairns 198.  
faír 268.  
fairnis 275.  
fairra 273.  
faírna 498.  
fali 471.  
fallan 373.  
falo (falawēr) 271.  
falo (falwes) 572.  
falr 471.  
faltha 165, 166.  
fana 275.  
fangen 114.  
fano 275.  
far- 268, 282.  
farah 166, 728.  
faran 272.  
farawā 584.  
farjan 272.  
farspirman 288.  
farvail 242.  
farwāzu 248.  
far-ziru 235.  
fasal 272.  
fass 246.  
fast 257.  
fatar 269.  
fataro 270.  
fathm 211.  
  
-faths 282.  
faúhō 358.  
faúr 269.  
faúra 269.  
faúrbiudan 262.  
favai 270, 541.  
feáva 270.  
fēdah 210.  
fēdara 210, 709.  
fēh 165.  
fēhida 164.  
fēhjan 164.  
feigi 466.  
fēl 271.  
feld 271.  
felga 166.  
fer- 268.  
ver- 268.  
verleihen 463.  
vērn 275.  
vērment 275.  
ferno 273.  
fersa 282.  
vērt 275.  
fesa 277.  
fest 257.  
fētah 210.  
few 270.  
fezzil 245.  
fidur- 488.  
fidurragineis 190.  
fidvōr 27, 488.  
vier 488.  
figgrs 114.  
fihu 268.  
-fill 271.  
filleins 271.  
filu 281.  
filu-faihs 165.  
filusna 281.  
fils 276.  
fimf 464.  
finden 210.  
findu 210.  
fintha 210.  
fiór 488.  
fiördhr 272.  
fjöturr 245.  
firzu 246.  
fis 498.  
fiuhta 164.  
fiuka 509.  
fiur 286.  
flah 165.  
flahs 165.  
flahtōm 165.  
flaf 523.  
flaum 279.  
flegil 278.  
fleiri 281.  
flēkan 277, 278.  
flestr 281.

- flewu 279.  
 fliesen 45.  
 flihu 165.  
 flins 279.  
 flint 523.  
 fluzu 279.  
 flodus 279.  
 flöh 374.  
 floum 280.  
 fluchen 278.  
 fluss 45.  
 fodeins 270.  
 fôdjan 270.  
 fôhé 270.  
 fol 277.  
 folc 73, 277.  
 folma 268.  
 folo 287.  
 fona 263.  
 vora 269.  
 fôtus 245.  
 fra 268.  
 fraitan 38.  
 fraliusan 368.  
 frathjan 673.  
 fraths 673.  
 frawjan 283.  
 freis 659.  
 fressen 38.  
 frijôn 283.  
 frijônâ 283.  
 friosan 351.  
 fruma 73, 284.  
 frumist 284.  
 fruo 284.  
 fûi 286.  
 fuir 286.  
 fûki 286.  
 fula(n) 287.  
 fulla-fahjan 267.  
 fullô 277.  
 fulls 277, 554.  
 fûls 286.  
 fûna 286.  
 fuoga 267.  
 fuoz 245.  
 furh 166.  
 furi 269.  
 furiro 284.  
 furisto 284.  
 fûst 286, 364.  
 fyrs 287.  
  
 g from j 612.  
 gâ-, ge- 392.  
 gaagvja 190.  
 gabaûr 299.  
 gabaûrths 299.  
 gadars 256.  
 gadêds 254.  
 gadigis 182.  
 gafagjan 267.  
  
 gaggan 473.  
 gagrim 203.  
 gaidv 201.  
 gajuko, -jukô 182.  
 galeithan 497.  
 gallâ 203.  
 galoubu 34.  
 galukan 181.  
 gaminthi 312.  
 gamunan 103, 312.  
 gân 473.  
 ganagljan 321.  
 ganah 308, 309.  
 ganamnjan 321.  
 ganisan 314.  
 gans 200.  
 gapiunan 476.  
 gards 200.  
 gariudjô 252.  
 garnir 203.  
 gasinthja 241.  
 gaskapjan 167.  
 gasleithjan 557.  
 gasothjan 398.  
 gasts 494.  
 gasuljan 373.  
 gataira 235.  
 gatamjan 232.  
 gathaursans 224.  
 gatilôn 234.  
 gavadjôn 249.  
 gavagja 192.  
 gavasjan 22, 376.  
 gavaûrdi 343.  
 gaveisôn 242.  
 gavigan 192.  
 gaviljis 549.  
 gawahanjan 459.  
 gé 202.  
 gehan 612.  
 geimi 202.  
 geinôm 196.  
 geist (jeist) 442.  
 geiz (haedus) 202.  
 geiz (avaritia) 201.  
 geliberôt 266.  
 gëlo 202, 203.  
 gelouben 34.  
 genesung 315.  
 geniessen 725.  
 gequak 573.  
 gequiek 574.  
 gër 198.  
 gëri 198.  
 gering 192.  
 gerjan 377.  
 gëron 198.  
 gersta 156.  
 gescheit 110.  
 gësteron 201.  
 get 196.  
 gëtm 196.  
  
 gîn 196.  
 ginëm 196.  
 gö 202.  
 giri 198.  
 giri 198.  
 gischt 377, 612.  
 gistradagis 201.  
 gi-swiftôn 379.  
 gitan 196.  
 gitar 256.  
 gitrahlian 134.  
 giuta 204, 205.  
 giwaht 459.  
 giwar 346.  
 giwizo 242.  
 gläd 202.  
 glaggvus 178.  
 glauben 34.  
 gleäv 178.  
 gnna 502.  
 gomo 197.  
 graba 180.  
 gram 203.  
 gramizzôn 203.  
 greipan 493.  
 grëtan 197.  
 grim 203.  
 grimetan 203.  
 grimmida 203.  
 griss 203.  
 grôba 180.  
 grôju 202.  
 grôni 202, 555.  
 gross 356, 549.  
 grow 356, 549.  
 gruoju 202.  
 guest 87.  
 gulth 204.  
 guma 197.  
 gund 397.  
 gymbr 202.  
  
 -ha (suffix) 303.  
 häfar 142.  
 hafela 148.  
 hafja 141.  
 hafr 142.  
 haft 141.  
 hehan 154, 708.  
 hahsa 154.  
 hails 40, 168.  
 hails 140, 554, 681.  
 hailstone 144.  
 hails 145.  
 hafrtô 143, 554.  
 hafus 148.  
 haithi 113.  
 halam 139.  
 halde 156.  
 halja 140.  
 hallr 156.  
 hallus 144.  
  
 halm 139.  
 halôn 139.  
 halsagga 130.  
 hamar 131.  
 hamarr 131.  
 hamfs 153, 511.  
 hamla 153.  
 Hamm 152.  
 hamma 152.  
 hammel 153.  
 hamo 696.  
 hana 141.  
 hanc 380.  
 hanf 141.  
 hano 178.  
 hanpr 141.  
 hardus 144.  
 hart 18.  
 harti 144.  
 haubith 148, 425.  
 haurds 144.  
 haurn 147.  
 hausjan 152.  
 heafod 148.  
 heafola 148.  
 hearfest 144.  
 hefte 141.  
 heide 113.  
 heidh 113.  
 heil 140.  
 hein 159.  
 -heit 487.  
 heitar 113.  
 heiva-frauja 145.  
 helan 140.  
 hella 140.  
 heorot 147.  
 herbist 144.  
 hëru 148.  
 hërzâ 143.  
 hilde 140.  
 hilgen 140.  
 hill 153.  
 bille 140.  
 himil 141.  
 himinas 141.  
 hinke 380.  
 hinthan 196.  
 hiörr 148.  
 birni 143.  
 hiruz 147.  
 hise 145.  
 hiure 355.  
 hlwo 145.  
 hläder 150.  
 hlains 150.  
 hlaiv 150.  
 hlaun 150.  
 hlaupan 143.  
 hleiduma 150.  
 hleithra 150.  
 hlifa 149.



- liftus 60, 149, 425.  
 lija 150.  
 linēm 150.  
 liuma 151, 554.  
 hlosēm 151, 368.  
 hloufan 44.  
 hlūt 151.  
 hlūtār 151.  
 hlutr 151, 656.  
 hnazza 712.  
 hnit 243.  
 hniz 243.  
 hœll 362.  
 hof 149.  
 hog 382.  
 hol 157.  
 holer 139.  
 holm 153.  
 Holsaten 239.  
 holt 149, 373.  
 holz 149, 373.  
 horn 18.  
 hort 18.  
 houbit 143.  
 hraban 153.  
 hraiv 155.  
 hramjan 65, 155.  
 hrāo 156.  
 hrata 154.  
 hreifi 525.  
 hrēo 155.  
 hridder 156.  
 hrind 147.  
 hring 158.  
 hrucki 350.  
 hrukjan 534.  
 hruoh 153.  
 hryggr 350.  
 hūd 169.  
 hulandi 157.  
 hund 84, 135.  
 hunds 159.  
 huon 141.  
 hups 529.  
 hurt 144.  
 hva 458.  
 hvairban 351, 528.  
 hvairnei 143.  
 hvaiti 292.  
 hvan 466.  
 hvapja 142, 280.  
 hvar 466.  
 hwār 466.  
 hvas 466.  
 hvath 466.  
 hvathar 466.  
 hwēdar 466.  
 hveits 292.  
 hverfa 528.  
 hverna 147.  
 hvern 147.  
 hýdan 259.  
 idal 250.  
 iddja 64, 401, 402, 624.  
 igil 193.  
 ik 307, 525, 689.  
 ilan 551.  
 iljan 360.  
 im 375.  
 imbi 264.  
 in 309.  
 -in (suffix) 72.  
 inna 309.  
 innādiri 309.  
 innathrō 309.  
 innuma 309.  
 inuh 306.  
 irren 556.  
 ist 375.  
 ita 240.  
 ital 250.  
 itruchan 182.  
 iwih 526.  
 izu 240.  
 j OHG. becomes e 608; j with pre-  
 fixed d 624; j dis-  
 appearing in the  
 Scandinavian lan-  
 guages 602.  
 ja 624.  
 jabai 396.  
 jār 355.  
 jau 396.  
 jēr 355.  
 jēsan 377, 625.  
 jiuka 182.  
 jiukan 182.  
 joh, joch 182.  
 John 624.  
 jugga-lauths 362.  
 jugs 589.  
 juk 182.  
 jukuzi 182.  
 jung 602.  
 jus 397.  
 k Goth. in borrowed  
 words for x 416;  
 k = Skt. kh 82.  
 kalbō 478.  
 call 178.  
 kalla 178.  
 calo 82.  
 kalp 478.  
 camb 174.  
 kann 178.  
 kas 476.  
 cast 476.  
 kasta 476.  
 kättr 172.  
 kaum 477.  
 kaupōn 142.  
 kaureins 475.  
 kauritha 475.  
 kaurjan 475.  
 kaurn 176.  
 kaurs 475.  
 kausjan 177.  
 keinan 175.  
 kēla 478.  
 kēlikn 153.  
 kerban 180.  
 kerben 57.  
 kijan 175.  
 chind 175.  
 kinnus 307, 525.  
 kipfel 528.  
 kirru 177.  
 kiusa 177.  
 klauben 178.  
 klieben 57.  
 kliobhan 178.  
 Clyde 151.  
 knār 179.  
 knāu 92, 178.  
 kniu 180.  
 chnuat 175.  
 koman 473.  
 kommen 433.  
 kostr 177.  
 koufan 142.  
 koufōn 142.  
 krage 478.  
 cran 175.  
 chranuh 175.  
 kukja 159.  
 chūmo 740.  
 kuni 74, 175.  
 kunthi 178.  
 kunths 178.  
 chuo 92.  
 cus 177.  
 kussju 159.  
 kustus 177.  
 kvikvendi 476.  
 l, for Indog. r 344.  
 laffan 363.  
 lāga 194.  
 lager 194.  
 lager (laurus) 596.  
 laggei 183.  
 laggs 183, 192.  
 lagja 194.  
 laian 657.  
 laikan 526.  
 läccan 671.  
 lauf'n 44.  
 lauhmōni 160.  
 laun 363.  
 laus 368, 554.  
 lausja 368.  
 lausquiths 174.  
 law 364.  
 leather 659.  
 lēbara 266.  
 lēdec 497.  
 leeg 371.  
 leffil 363.  
 lefsa 363, 554.  
 lefze 363.  
 legar 194.  
 leihe 462, 463.  
 leihvan 462.  
 lein 366.  
 leiptr 265.  
 lēccōn 194.  
 leóma 160.  
 lepja 363.  
 lepill 363.  
 lesen 364.  
 let 462.  
 lewo(n) 366.  
 lidic 497.  
 lidza (for liggja)  
 670.  
 liga 194.  
 ligrs 194.  
 lthhamo 696.  
 lihti 192.  
 likkja, lisza 669.  
 ltn 366.  
 lind 113.  
 linnr 366.  
 liot 160.  
 ljōs 161.  
 lioxan 161.  
 lippe 363.  
 lisa 364, 365,  
 368.  
 lithus 340.  
 liuban 367.  
 liubēn 367.  
 liubs 367.  
 liudan 352, 362.  
 liuhath 160.  
 liut 362.  
 lixan 161.  
 ll, assim. from lj  
 664.  
 lōa 42, 368.  
 lob 367.  
 lobōn 367.  
 lög 364.  
 lōh 113.  
 locken 137.  
 lōs 368.  
 low 371.  
 luhs 369.  
 lungā 288.  
 lungina 288.  
 lungu 288.  
 lustōn 361.  
 lustus 361.  
 lýsa 161.

- stains 214.  
 stafrnð 206.  
 stafrð 213.  
 stacchilla 215.  
 staks 215.  
 stal 212.  
 stam 213.  
 stám 211.  
 stamp 212.  
 stampón 212.  
 standa 211.  
 stande 212.  
 stapfe 214.  
 star (rigidus) 213.  
 star (sturnus) 355.  
 704.  
 stara 355.  
 starfa 114.  
 starve 114.  
 stat 211.  
 staths 211.  
 stauta 227, 695.  
 stearn 355.  
 stēga 195.  
 steiga 195.  
 steigel 195.  
 stellan 212, 664.  
 stelle 695.  
 stelze 212.  
 sterpan 114.  
 stērro 206.  
 stier 429.  
 stift 214.  
 stifulén 214.  
 stiggan 215.  
 stigqvan 218.  
 stihhil 215.  
 stihhu 215.  
 stiks 215.  
 stil 212.  
 stila 213.  
 stilli 212.  
 stingu 215.  
 stincan 218.  
 stirbu 213.  
 stirna 214.  
 stiur 218, 429, 695.  
 stiure 213.  
 stiurjan 212.  
 stiviti 216.  
 stōls 211.  
 stōuwen 216.  
 stōzu 227, 695.  
 str, arising from sr  
 353.  
 strahl 206.  
 strang 380.  
 strangi 380.  
 stráð 215.  
 strauja 215, 216.  
 streng 381.  
 stric 380.  
 strð 215.  
 stroum 353.  
 stúfr 227.  
 stumbalón 227.  
 stumpf 227, 695.  
 stumph 227.  
 stun, stunód 213.  
 sturm 227, 695.  
 stürzen 227.  
 styn, stynja 213.  
 sð 382.  
 suila 381.  
 sulh 137.  
 sulja 373.  
 sulza 548.  
 suman 393.  
 sums 323, 393.  
 sunjis 375.  
 sunus 395, 654.  
 suoz 229.  
 sùts 229.  
 svaihra 28, 136.  
 svaifrð 136.  
 swal 287.  
 swalawá 287, -ewe  
 584.  
 swalwe 287.  
 swam 380.  
 svamms 380, 695.  
 swanz 695.  
 svasve 601.  
 své 443.  
 swebjan 289, 425.  
 svefn 289, 425.  
 sweif 380.  
 sweifan 380.  
 sveigja 379.  
 svein 382.  
 sveinn 395.  
 sveiti 242.  
 sweiz 242.  
 sweizjan 246.  
 svelan 373, 700.  
 swéllan 372.  
 svés 393.  
 svéte 229.  
 svif 380.  
 swift 379.  
 swiften 379.  
 swigón 379.  
 swihhan 379.  
 svikns 481.  
 swimman 380.  
 svipa 380.  
 svöppr 380.  
 svumsl 380.  
 tā 133.  
 tafn 232.  
 tagr 133.  
 tagrja 133.  
 tahja 133.  
 tafhs-va, -vð 235.  
 taihun 134.  
 tacan 218.  
 take 218.  
 tácor 231, 596.  
 tál 237.  
 tale 364.  
 tát 254.  
 táu 252.  
 teig 182.  
 teiha 134.  
 tékan 218.  
 tēnar 255, 256.  
 tenni 255.  
 th, ONorse 417.  
 thafrh 222.  
 thafrkð 222.  
 thak 186, 429,  
 695.  
 thanja 65, 217.  
 thaurnus 223, 501.  
 thaúrþ 227.  
 thaúrsja 224.  
 thaúrstei 224.  
 thávan 218.  
 theffjan 502.  
 theiha 220.  
 theins 219.  
 thidhurr 225.  
 thjarka 480.  
 thiggju 220.  
 thim 545.  
 thiuda 226, 368.  
 thórr 218, 429.  
 thrafstja 224.  
 thräg 196.  
 thragja 196.  
 thracian 480.  
 thrávan 222.  
 threihan 468.  
 threis 226.  
 thridja 226.  
 thrimman 226.  
 thrömr 222.  
 thrutsfill 271.  
 thrym 227.  
 thu 219.  
 thuk 526.  
 thula 220, 554.  
 thūma 226.  
 thun 217.  
 thunjan 217.  
 thuncon 219.  
 thunnr 65.  
 thurkr 599.  
 thusunde 364.  
 thvaha 219, 455.  
 thvara 223.  
 thyrapaz 227.  
 tiber 232.  
 tifer 232.  
 tila 252.  
 timber 234.  
 timrjan 234.  
 tindr 244.  
 tior 256.  
 tiuha 135.  
 tívar 236.  
 Tivesdag 236.  
 tð 233.  
 tobel 513.  
 tohtar 258.  
 tòm 254.  
 tor- 240.  
 tor 258.  
 torht 101, 113, 134.  
 toum 258.  
 trádha 238.  
 trāgi 682.  
 tracht 300.  
 trahtón 134.  
 trāchtig 282.  
 traege 682.  
 trauan 596.  
 tree 238.  
 treffen 220.  
 treno 257.  
 trift 171.  
 triggs 596.  
 trio 238.  
 tritu 238.  
 triu 238.  
 triveins 238.  
 truda 238.  
 tuggð 194.  
 tunst 258.  
 tunthus 244.  
 tuom 254.  
 tus- 240.  
 tuz- 240.  
 tuz-vérjan 240.  
 tvai 239.  
 tvaddjé 624.  
 tvisstass 239.  
 u, 'dulled' from a  
 92; u becoming  
 half-mute e 582.  
 ubar 425.  
 úder 260.  
 uf 290.  
 ufar 289, 425.  
 ufarð 289.  
 ufbauljan 301.  
 ufblesan 300.  
 ufrakja 185.  
 uh 487.  
 umbi 293.  
 umpi 293.  
 un- 306, 439.  
 unc 194.  
 unda 248, 249.  
 undar 309.  
 undea 248, 249.



- understivel 214.  
ungezibele 232.  
ungr 602.  
unsels 371.  
unsih 526.  
unst 73, 305.  
untergehen 309.  
unviti 242.  
uohsa 132.  
uover 469.  
úr 350.  
urga 587.  
ur-reisan 556.  
us 289, 384.  
usalthans 356.  
usanan 545.  
úsel 398.  
ushulón 157.  
usilvar 398.  
uslauseins 368.  
usskavjan 152.  
usskavs 100, 152.  
usthulains 220.  
ut 228.  
útar 260.  
uwila 388.  
úwo 291.  
uz 228.  
uz-ana 305.
- v, passing into g  
596; v disappear-  
ing in Scand. lan-  
guages 558.  
w becoming b 584;  
m 590.  
wá 466.  
waba 295.  
vadi 249.  
wáfan 460.  
vág 193.  
wága 192.  
wagan 192.  
waban 459.  
wahr 376.  
vahasjan 64, 383.  
vahstus 383.  
vaia 387.  
vaik 507.  
vaila 550.  
wain 193.  
vafr 589.  
vafrpan 351.  
vait 101, 242.  
wachan 180.
- wachar 187.  
wall 587.  
valjan 549.  
walm 494, 587.  
valtjan 359.  
valvjan 358, 557,  
565.  
vans 702.  
wanst 174.  
vár 42, 388.  
war 101, 346.  
vär 350.  
wara 101, 346.  
war(a)m 493.  
varjan 550.  
varmjan 493.  
war nemen 101, 346.  
warón 346.  
vars visan 346.  
wart 101, 346.  
wartén 346.  
warto 346.  
vasti 376.  
watan 517.  
watar 72, 681.  
vatò 72, 248.  
vaúrd 343.  
vaúrkjan 181.  
vaúrstv 286, 364.  
vaúrts 352.  
vaúrms 552, 553.  
wazar 248.  
wearr 739.  
wëban 61, 295.  
webbi 60.  
wed 249.  
veder 260.  
vedhja 249.  
wefsa 382, 699.  
vëgòs 192.  
vëgs 192.  
wëhha 135.  
wehren 550.  
wëhsal 135.  
veihs 163.  
vein 390.  
veitvòds 566.  
welk 555.  
well 550.  
wella 358.  
wellan (roll) 358.  
wellan (wish) 549.  
wenke 542.  
wëpna 460.  
wërah 181.
- wërk 181.  
werran 345.  
west 377.  
wette 249.  
wetter 260.  
wetti 249.  
wid 389.  
wida 389.  
widamo 249.  
vidan 390.  
widde 389.  
widder 209.  
widerswalm 372.  
vidja 610.  
viduvairna 36.  
viduvò 36.  
vigs 192.  
wìch 163.  
wìchu 135.  
wicke 588.  
vík 135.  
viljan 549.  
willjo 549.  
willo 549.  
vilva 557.  
vilvan 557.  
vindan 390.  
vindauga 116.  
window 116.  
vinds 387.  
winchan 542.  
wirbel 351.  
wirz 352.  
vis 378.  
visan 207.  
visellin 272.  
wist 207.  
vitan 242.  
witma 249.  
vitrs 242.  
vithra 239.  
vithrus 209.  
wizan 242.  
vòcor 187.  
vòkr 187.  
völlr 360.  
volma 268.  
voma 324.  
work 622.  
voma 324.  
vörr 345.  
vraiqus 481.  
vrida 229.  
vrika 181.  
vrincl 481.
- vringan 181.  
wriselik 348.  
wrong 181.  
wrought 622.  
vruggò 181.  
vulfs 161.  
vulla 344, 556, 591.  
vullareis 344.  
wulluh 358.  
wulsta 358.  
vunan 725.  
wunsc 702.  
vuoge 340.  
Wuotan 517.  
wurgjan 587.  
wurz 352.  
wurzá 352.  
wurzala 352.
- yesterday 87.  
ýra 350.
- z (Goth.) desidera-  
tive 556.  
zahar 133.  
záhi 133.  
zählen 364.  
zähre 133.  
zála 237.  
zam 232.  
zamón 232.  
zand 244.  
zar- 239.  
ze 233.  
zëbar 232.  
zëhá 75, 133.  
zëhan 92, 134.  
zeigóm 134.  
zeihhur 231.  
zer- 239, 240.  
zësaawá 235.  
zëso 235.  
zi 233.  
zilhu 134.  
zil 234.  
zimbar 234.  
Zio 236, 616.  
ziöhu 135.  
ziru 235.  
zisamane 322.  
zorah 134.  
zuber 621.  
zuo 233.  
zur- 240.

## VII. LETTO-SLAVONIAN.

### A. LETTISH.

(Lithuanian undistinguished. Old Prussian in brackets. Lettish with an asterisk.)

abejôju 293.	(at)ankù 463.	bàdinu 262.	dubùs 513.
abù 293.	átkarpai 144.	budrùs 262.	dukté 258.
(ains 320.)	âtmenu 312.	bôgti 189.	dúmai 60, 259.
aka 113.	atmintis 312.	*bumbuls (knob)	dumpiù 228.
âkas 463.	at-vérti 550.	291.	dùmplés 228.
akls 101, 463, 464.	angmù 187.	bumbuls (blister)	dùrys 258.
akmù 131.	âugsztas 383.	291.	dûdu 237.
*aknis 461.	âugu 187.	bundù, budéti 262.	dûmi 237.
âkti 101, 463.	(au-klips 149.)	bùtas 304.	dûnis 73, 237.
aléjus 359.	âuksztas 383.	bûti 304.	dûtis 237.
alkûnè 374.	ausls 403.		dvejì 239.
ambiti 504.	auszrà 400.	da- 233.	dvi 239.
anas 306.	âusza 400.	daflinti 232.	
angls 194.	âvinas 391, 590.	dailùs 232.	e, è, ë 126.
anka 130.	avýnas 386.	dantls 244.	èdlkas 240.
âksztas 190.	avis 52, 92, 391.	daraù 238.	èdis 73, 240.
ânt 92, 206.	â 525.	dârbas 238.	èdmi 46, 240.
ântis 317.		dâžyti 29.	èdu 240.
ap- 264.	badaù 474.	debesls 294.	eiml 401.
ap-âuksinu 264.	bajus 298.	dédas 255.	eimù 401.
ap-vynýs 390.	bâltas 297.	dédé 255.	eismé 401.
apé 264.	bâmba 294.	dédénas 255.	èlnis 360.
(ape 469.)	banda 261.	dedù 254.	(enkopts 167.)
api- 264.	bandýti 439.	délé 229, 253.	(enwakémai 459.)
api-lasùs 364.	bangà 542.	*dêls 253.	erôlis 348.
*apsa 382.	Bang-putis 542.	démí 254.	eris 348.
âpstas 510.	baughs 189.	dênà 236.	èrytis 342, 345.
âpstùs 510.	bébrus 304.	dervà 238.	(er-mirit 330.)
âr 341.	bendras 261.	dészimtis 134, 442.	esaba 375.
arimas 341.	bérnas 299.	desziné 235.	esml, ésti 375.
arklas 341.	bézdas 230.	dévas 236.	esnis 375.
artl 340.	bezdh 230.	dēverls 231.	ēzsmas 679.
ârti 341, 554.	bijáu 298.	devynl 294, 310.	ežys 193.
ârtymas 340.	bijóti 298.	devintas 310.	
ârtinti 340.	bité 264.	dirbu 238.	(ganna 175.)
asls 378.	bitls 264.	dirù 235.	gârdas 200.
*assins 398.	blizgù 188.	*dît 236.	gardùs 358.
aszarà 133.	blusà 374.	dýroti 134.	garnys 176.
aszls 383.	blužnis 288.	dovýti 232.	garsas 177, 178.
aszmù 131.	(bratis 303.)	drasà 256.	garsùs 177.
asztrùs 131.	brólis 303.	drasùs 256.	geležls 197.
asztûnl 92, 163.	broteréls 303.	dristù 677.	gèltas 202.
asztûal 462.	brothùszis 303.	dù 239.	gémbe 174.
aszvà 457, 462.	brukù 115, 302.	dûbé 513.	genté 175.



gentis 175, 547.  
gerėti-s 198.  
gerklė 478.  
gėrti 478.  
gėrvė 176.  
gervėlė 176.  
-gī 526.  
gljė 477.  
gilė 474.  
gimti 65, 547.  
gyrā 177.  
gývas 477.  
gyvatā 477.  
gyvenū 477.  
glindas 243.  
glitūs 367.  
globóti 532.  
gódas 196.  
(gorme 493.)  
grábė 180.  
grėbti 492.  
\*grūts 475.

į 309.  
įgis 593.  
ilgas 191.  
imū 323.  
intė 308.  
irklas 342.  
(irno 340.)  
irti 342, 554.  
įsakaū 467.  
isz 383.  
iszkađā 720.  
iszkalā 720.  
jaūnas 589.  
\*jaut 626.  
javal 625.  
jāvas 625.  
javėnā 625.  
jėgti 589.  
jėszkóti 402.  
jls, jl, jū, je 396.  
jūngas 182.  
jungtū 182.  
jus 397.  
jūszė 626.  
jūsta 627.

kadā 466.  
kaī 466.  
kaimýnas 145.  
kálnas 153, 346.  
kálti 149.  
kanklnti 139.  
kāpas 167, 692.  
kapónė 153.  
kapóti 153.  
kariū 155.  
karnā 148.  
kárti 65.

karve 147.  
kās 466, 467.  
katilinti 159.  
katrās 466.  
kaūkti 152.  
kāulas 157.  
\*kauls 157.  
kėlias 146.  
keliaūju 146.  
kėlti 139, 153.  
kėmas 145.  
kėnkti 139.  
kepėje 465.  
kepū 432, 465.  
kerpū 144.  
kertū 148.  
kėturi 27, 488.  
ketvirtas 488.  
kirmėlė 552.  
klrmis 552.  
klausaū 151.  
klįjei 153.  
kóris 149.  
krāujas 155.  
kregždė 199.  
kreivas 158.  
krýpti 143, 525.  
krūvinas 155.  
kukūti 152.  
kulnis 362.  
kūlti 362.  
kūr 466.  
kuritū 154.  
kuszyś 159.  
kvāpas 115, 142, 458.  
kvėpalai 142.  
kvėpóju 142.  
kvėpti 115, 142.  
lankā 160.  
lāpė 357.  
(lapinis 363.)  
lapukas 357.  
\*laszit 364.  
\*laudis 362.  
laūkas 113, 161.  
laūkis 161.  
lāukiū 160.  
lėju 366.  
lėkas 462.  
lėkū, likti 462.  
lėngvas 192.  
lėnkė 160.  
lėnkti 365.  
lėpenā 265.  
lėsas 371.  
lėsti 364.  
lėziū 194.  
lėžiūvis 194.  
(likuts 371.)  
līmpū, līpti 266.

linai 366.  
linas 366.  
-link- 365.  
linkės 365.  
linkti 365.  
linta 366.  
lipūs 266.  
ližus 194.  
lýtī 366.  
ljúta 367.  
lugnas 183.  
\*lūkót 160.  
lúpa 363, 554.  
luszis 369.  
lúžti 183.  
maīnas 324.  
mainýti 324.  
maiszýti 334.  
malónė 329.  
malū, málti 337.  
mán 327.  
mandrūs 312, 313.  
manksztaū 325.  
māras 331.  
mārės 332.  
matóju 243.  
matúti 327.  
mauju 324.  
meilūs 329.  
mėlynas 370.  
\*mels 370.  
mėlžu 184.  
mėnesis 333.  
mėnkas 335.  
mentūrė 335.  
mentūris 335.  
menū 103.  
mėnū 333.  
mėrā 327.  
mėtas 327.  
midūs 260.  
migla 195.  
milas 591.  
miniū 312.  
mīnkau 325.  
mīnksztas 325.  
minū 335.  
mīrti 331.  
mīszinis 334.  
mīszti 334.  
mýliu 329.  
myžū 195.  
móku 161.  
mólis 370.  
mórai 331.  
motė 333.  
murmłenti 336.  
murmū 336.  
musė 336.  
(na 306.)

(nabis 294.)  
nāgas 322, 422.  
naktis 163, 440.  
nāmas 234, 313, 314.  
nāras 316.  
narinū 316.  
nasztā 308.  
naudā 725.  
naūjes 315.  
naujókās 315.  
nė 317.  
neī 317.  
nėkóti 451.  
nerū, nėrti 316.  
nesztū 308.  
(nevints 310.)  
(no 306.)  
\*nomr 313.  
nūmas 313, 314.  
olektis 374.  
óras 387.  
ožys 171.  
ožkā 171.  
pa 290.  
pādas 245.  
padurmū 256.  
palaikis 462.  
pāivas 271.  
pampti 511.  
pāntis 272.  
pāpas 511.  
par 268.  
pārszas 166.  
pāsaka 467.  
pasigendū 196.  
paskūi 716.  
pāskui 716.  
pāt 282.  
patī 282.  
pāts 282.  
pazlebėtyju 197.  
pėdā 245.  
pėktī 164.  
(peku 268.)  
pelenai 283.  
pėlnas 274.  
peln-aū, -ýti 274.  
pėmū 281.  
pėnas 270.  
pėnas 280.  
penkl 464, 487.  
pėnktas 464.  
penū 270.  
pēr 268, 269.  
pėrdzu 246.  
periū 282.  
perkū 273, 674.  
(perlānkai 504.)  
perlenkis 504.  
pėrti 278.

- pēszti 164.  
 pētus 270.  
 -pi 264.  
 piauti 268.  
 pikis 164.  
 piktas 164.  
 pills 281.  
 pilkas 271.  
 pilnas 277.  
 pllti 277.  
 plnti 272.  
 plrdis 246.  
 pirm 284.  
 pirnas 284.  
 piš 272.  
 plsti 272.  
 pykti 164.  
 plakū 277.  
 plasztakā 165.  
 platūs 278, 506.  
 plaūcezi 280.  
 plāuju 279, 577.  
 plaūkti 279.  
 plaūtiš 279.  
 plēkti 277.  
 plēnē 271.  
 plēvē 271.  
 plōkszczas 165.  
 plūsti 279.  
 po 290.  
 potā 280.  
 pra- 284.  
 pra-kilnūs 153.  
 prantū 673.  
 prēkis 273.  
 \*pretti 284.  
 pro- 284.  
 prōtas 673.  
 pūdau 286.  
 pūlei 286.  
 pūrai 287.  
 \*pūrji 287.  
 puslē 509.  
 pūsti 509.  
 puszyņas 164.  
 puszis 164.  
 pūvū, pūti 286.  
 pūlu, pūti 373.  
 rāginti 190.  
 \*rahpt 265.  
 rakinti 133.  
 rāmas 325.  
 ramdyti 325.  
 ramūs 325.  
 rankā 493.  
 rātas 343.  
 raudā 252.  
 raukā 349.  
 rēkiū 160.  
 rēvā 553.  
 riāugmi 182.  
 rimti 325.  
 rinkti 493.  
 rōpē 350.  
 rūdas 252.  
 rūdis 252.  
 rūpēti 266.  
 rūpūs 266.  
 sa- 392.  
 sa- 392.  
 sakaū 467.  
 saldūs 229.  
 sāpnas 289.  
 saūlē 551.  
 saūsas 393.  
 savāsis 393.  
 savē 393.  
 sēdmi, sēdzu 92, 240.  
 sēile 372.  
 sēju 379.  
 sēkis 137.  
 sēkmas 265.  
 sēkti 137.  
 sekū, sēkti 460.  
 sēti 548.  
 (sen 392.)  
 sēnas 311.  
 senēi 311.  
 sēnis 311.  
 senystē 311.  
 septyni 52, 265, 536.  
 septintas 265.  
 seris 354.  
 sētas 379.  
 sijōju 379, 667.  
 siūtas 381.  
 siuvū, siūti 381.  
 skaityti 489.  
 skaistliis 489.  
 skēdrā 247.  
 skēdžu 247.  
 skēndu 166, 523.  
 skiriū 156.  
 sklempiū 166.  
 skrebti 528.  
 skurā 168, 508.  
 \*smeet 329.  
 smērtis 331.  
 snaigalā 318.  
 snēgas 318.  
 snlgti 318, 692.  
 snlgti 318.  
 snūkis 319.  
 sodinū 240.  
 sōtas 398.  
 sotis 398.  
 sōtus 685.  
 spakās 699.  
 spardyti 288.  
 spartas 288, 503, 715.  
 spengti 704.  
 spiāudau 285.  
 spiāuju 285, 498.  
 spirti 288.  
 spragū 186.  
 spurgas 503, 700.  
 sraviū 353, 692.  
 srebū 295.  
 sriubā 295.  
 srovē 353.  
 staiginis 195.  
 staigūs 195.  
 stāklēs 211.  
 (stalle 212.)  
 statyti 211.  
 status 211.  
 stēbas 212.  
 stebūis 219.  
 stēgju 186.  
 stellūti 212.  
 stenēti 213.  
 stipras 214.  
 stiprus 214.  
 styru 213.  
 stōgas 186.  
 stōti 211.  
 stōviu 216.  
 strajē 215.  
 stūlys 216.  
 stūmū 216.  
 su- 392.  
 (subba 394.)  
 sunkiū, sunkti 137.  
 sunūs 395, 654.  
 surbēlis 295.  
 surbiū 295.  
 surikti 160.  
 sūris 349.  
 surus 548.  
 suvėrti 550.  
 svan 141.  
 svāras 354.  
 sverjū 354.  
 avidas 246.  
 svilti 373.  
 sz 126.  
 szeszēlis 168.  
 szeszi 384.  
 szēsziuras 136.  
 szikū 139.  
 szimtas 84, 135.  
 szirdis 143, 554.  
 sziszas 384.  
 szlaunis 150, 554.  
 szlējū 150.  
 szlovē 151.  
 sznypszti 319.  
 szū 159.  
 \*szvilpa 287.  
 szvilpinē 287.  
 szvilpiū 287.  
 taisyti 220.  
 tamš 545.  
 tamsras 545.  
 tamsūs 545.  
 tarpa 224.  
 tarpiti 224.  
 tās-gi 526.  
 taszyti 58, 220.  
 taukai 226.  
 (tauta 226.)  
 tavāsis 219.  
 (teikusna 58, 220.)  
 tėkinas 507.  
 tekys 220.  
 tekū 507.  
 telyczā 208, 223.  
 tempji 65, 217, 218.  
 temptyva 217.  
 tenkū 220.  
 tetā 225.  
 tėta 225.  
 tetēva 225.  
 tėtis 225.  
 (tikint 58, 220.)  
 tilkyti 58, 220.  
 tikras 220.  
 timpa 217.  
 tinkas 58, 220.  
 tinkū 220.  
 tirpti 224.  
 toli 490.  
 trēcias 226.  
 trimu 225.  
 trinti 222.  
 trys 226.  
 trupū, trupūs 223.  
 tū 219.  
 tūkstantis 364.  
 tunkū 226.  
 ūdra 248.  
 udroju 260.  
 ūgis 187.  
 (umpnis 709.)  
 ungurys 194.  
 ūpe 469.  
 ū 126.  
 ūdimas 244.  
 ūdžu, ūsti 46, 244.  
 ūgis 187.  
 vadinū 248.  
 vadōju 249.  
 (waidimai 242.)  
 (wais-pattin 163.)  
 vākarnas 377.  
 vālkarnas 136.  
 vālnas 497.  
 vandū 249.  
 vapsā 382.



vārdas 343.  
vasarā 42, 388.  
vasarinis 388.  
vēidas 242.  
veikti 107.  
vēizdmi 242.  
vējas 387.  
velkū 136.  
vēlyju 497, 549.  
vēlyjus 549.  
vēlti 358.  
vemalāi 324.  
vemju, vēmti 324.  
veržiū 181, 587.  
vēsz-pats 163, 282.  
vēžē 192, 193.  
vēžimas, vēžū 192.

vidti 332, 590.  
vidurys 332, 590.  
vidus 332, 590.  
vikis 588.  
vilkas 84, 161.  
vilna 344.  
vilnis 358.  
vilnōnis 344.  
vingē 542.  
virbas 351.  
(wirde 343.)  
virpiu 351.  
virszas 348.  
virtī 587.  
virtis 587.  
viržys 587.  
\*vitols 389.

výras 589.  
vyti 390.  
vytis 389.  
výzdis 242.  
vólioti 358.  
vorā 550, 740.  
ýva 291.

z accessory 188.

žālies 202, 555.  
žāndas 307.  
žardis 200.  
žarnā 203.  
žais 200.  
želiū 202.  
žēmā 201.

žemāi, žēmas 197.  
žémē 197.  
žemýna 197.  
žemlinis 201.  
žengū 473.  
žerēti 204, 494.  
žerplēti 494.  
žinaū 178, 442.  
žinomas 178.  
žioju 196.  
žiotis 196.  
žmū, plur. žmónēs 197.  
žolē 202, 555.  
žuvis 676, 723.  
žvērīs 256.

## B. SLAVONIC.

(Church-Slavonic undistinguished.)

agnēf 591.  
aje 391.  
azno 172.  
azū 525.

agorištī 194.  
aghati 305.  
aga 190.  
agūkū 87, 190.

bajati 296.  
basnī 296.  
berp 299, 554.  
bēda 272.  
bēlū 296.  
byti 304.  
blāditi 301.  
blekati 291.  
blekotati 291.  
blējati 291.  
blēdā 301.  
blēdī 301.  
blūcha 374.  
bobr (Bohem.) 304.  
bobū 297.  
bodā 474.  
bogū 297.  
bojati sē 298.  
braktū 299.  
brāti (Bohem.) 299.  
bratrū 303.  
bratū 303.  
brēmē 299.  
brēzgū 188.  
brūvī 295.  
brūžēja 291.  
brūžū 291.

buditi 262.  
buk (Bohem.) 188.  
buky 188.  
būdēti 262.  
bzditi (Bohem.) 230.  
cē 138.  
cēlū 140, 554.  
cēna 489.  
cēniti 489.  
četyrije 27, 488.  
četrūtij 488.  
činū 489.  
čislo 489.  
čistū 138, 440.  
čitā 489.  
čre-inja 147.  
črūvī 552.

damī 237.  
danī 237.  
darū 73, 237.  
davati 237.  
delūva 232.  
derp, drati 235.  
desētī 92, 134, 442.  
desinū 235.  
desma 133.  
devetī 310, 487.  
devetij 310.  
dēdū 255.  
dējā, deždā 254.  
dēlo 254.  
dētē 252.  
dēva 252.  
dēverī 231.

divadlo (Bohem.) 253.  
divesa 253.  
diviti sē 253.  
dībrī 513.  
dīnī 236.  
dīnīst 236.  
dychati 259.  
dymū 259.  
dlūgū 191.  
do 233.  
doilica 252.  
dojā 252.  
domū 234.  
drēmatī 233.  
drēva, drēvo 238.  
drūzati 256.  
drūznati 256.  
drūžū 256.  
drūžati 191, 192, 257.

duchū 115, 259.  
dunpī 259.  
duša 259.  
dūštī 258.  
dūva, dva 239.  
dvīrī 258.  
dvoj 239.  
dvorū 258.

Feodor (Russ.) 485.

gagnanije 179.  
gagnivū 179.  
gaspī 200.  
glagolati 178.  
glasū 177.

glipajā 481.  
gora 348.  
gorēti 493.  
gostī 494.  
govēdo 92, 478.  
govoriti 477.  
govorū 447.  
grabiti 492.  
graditi 200.  
gradū (hail) 197.  
gradū (wall, etc.) 200.  
grēti 493.  
grobū 180.  
gromū 203.  
grūlo 478.  
grūmēti 203.

hnida (Bohem.) 243.

choditi 241.  
chodū 241.

i, ja, je 396, 397.  
idā, itī 64, 401.  
igo 87, 182.  
imā 323.  
imenovati 321.  
ime 321.  
iskati 402.  
is-tūknati 220.  
izū 383.  
iz-virati 587.  
i-že 397.

jadī 240.  
jaje 391.

- jamí, ěmí 240.  
 jaro (Bohem.) 355.  
 jař (Bohem.) 355.  
 jazno 172.  
 jelej 359.  
 jelení 360.  
 jeř (Bohem.) 355.  
 jeři 193.  
 jetry 308.  
 jetro 309.  
 jucha 626.  
 junů 589.  
  
 kalů 146.  
 kamení 131.  
 kyj 466.  
 klěti 140.  
 klíj 153.  
 ključati se 150.  
 ključ 150.  
 kloniti 150.  
 kolo 158.  
 konoplja 141.  
 kopati 167.  
 kopet (Bohem.) 142.  
 koprů 142.  
 kotoryj 466.  
 krakati 534.  
 kratůkŭ 148.  
 krava 147.  
 kratŭ 144.  
 krěpŭ 143.  
 krikŭ 534.  
 krivŭ 158.  
 kruk (Pol.) 153.  
 krŭvi 84, 155.  
 kukavica 152.  
 kupa 159.  
 kupiti 142.  
 kupel 142.  
 kŭto 466.  
 kvičeti (Bohem.) 574.  
  
 lakŭti 374.  
 laska 361.  
 laskati 361.  
 laskavŭ 361.  
 laka (palus) 160.  
 laka (dulus) 365.  
 lakŭ 365.  
 ležati 194.  
 lęka 365.  
 lęgati 194.  
 lępiti 266.  
 lępŭ (viscum) 266.  
 lępŭ (decorus) 266.  
 lęto 355.  
 lęvŭ 361.  
 lijati 366.  
 lizati 194.  
 ligŭkŭ 87, 192.  
  
 linŭ 366.  
 livŭ 366.  
 ljuby 367.  
 ljubiti 367.  
 ljubimi 368.  
 ljubŭ 367.  
 ljudŭ 362.  
 loj 366.  
 losi 132.  
 loviti 363.  
 lovŭ 363.  
 lože 194.  
 luča (ray) 161.  
 luči 161.  
 luna 161.  
  
 makŭ 162.  
 mati 333.  
 mađo 662.  
 mađrŭ 312, 313.  
 mađa 325.  
 mađŭ 103.  
 međŭ 260.  
 melja, mlěti 337.  
 meťa, mesti 323, 506.  
 mežda 332.  
 meždu 92, 332.  
 me 327.  
 meknati 325.  
 meknŭ 325.  
 mešo 595.  
 meťa 335.  
 meťeži 335.  
 mezdra 595.  
 meňa 324.  
 meňa 327.  
 mešeti 333.  
 mešiti 334.  
 Miklos (Sloven.) 544.  
 milo 329.  
 milost 329.  
 milovati 329.  
 mi-ŭ 329.  
 myšica 338.  
 myši 338.  
 miči 327.  
 mŭgla 195.  
 mŭna, meči 335.  
 mŭnėti 312.  
 mŭnij 335.  
 mŭzda 89, 260.  
 mladŭ 113, 230.  
 mlěko 173.  
 mlŭza 87, 184.  
 močiti 162.  
 moči 162.  
 moga, mošti 333.  
 moknati 162.  
 Morea 469.  
 morje 332, 469.  
  
 mošti 333.  
 morŭ 331.  
 mrakŭ 195, 568.  
 mravij 337.  
 mrěti 331.  
 mrětvŭ 331.  
 mucha 336.  
 mušica 336.  
  
 na (prepos.) 306.  
 na (pronom. stem) 320.  
 na-poiti 280.  
 naví 162.  
 ne 317.  
 nebo 294, 425.  
 nesa, nesti 308.  
 neti (Bohem.) 267.  
 netij 267.  
 neže 317.  
 nŭnė 318.  
 noga 322.  
 nogŭti 322.  
 nošti 163.  
 novŭ 315.  
 noži 546.  
  
 o 293.  
 oba 293.  
 o-bavati 296.  
 o-baviti 296.  
 o-brŭvi 295.  
 obŭ 293.  
 oči 464.  
 okno 113, 116, 463.  
 oko 101, 463, 464.  
 olěj 359.  
 olovo 370.  
 onŭ 306.  
 opona 276.  
 oralo 341.  
 orati 341.  
 orlŭ 347.  
 osa 382.  
 osi 383.  
 oslŭ 402.  
 osmí 163.  
 ostrovŭ 353.  
 ostrŭ 131.  
 oticŭ 207.  
 ovica 391.  
  
 pa 290.  
 pada 245.  
 paliti 283.  
 paměti 312.  
 pán (Bohem.) 282.  
 pasti 168.  
 papŭ 511.  
 patŭ 270.  
 pęto 272.  
 pekŭ 432, 465.  
  
 pepelŭ 283.  
 pero 210.  
 peři 465.  
 peři 286.  
 peři 464, 487.  
 peřij 464.  
 pęsŭkŭ 277.  
 pitati 270.  
 piti 280.  
 pitomŭ 270.  
 pivo 280, 655.  
 plŭkŭ 164.  
 plŭna, peři 272.  
 písati 165.  
 pístrŭ 165.  
 písŭ 168.  
 píšenica 277.  
 píšeno 277, 498.  
 pŭr (Bohem. glow-ing ashes) 286.  
 pŭr (Bohem. couch-grass) 287.  
 pyro 287.  
 plamy 283.  
 plavŭ 279.  
 plavŭ 271.  
 plemę 73, 277.  
 plesna 498.  
 pletŭ 165, 166.  
 pliuja 285.  
 plovŭ, plovja, plujŭ, pluti 279, 577.  
 plŭkŭ 73, 277.  
 plŭnŭ 277, 554.  
 plušta 280.  
 plŭstŭ 276.  
 pnu, pnouti (Bohem.) 272.  
 po 290.  
 podŭ 290.  
 po-greba 180.  
 po-jasati 627.  
 po-jasŭ 627.  
 poja, poiti 280.  
 pokoj 145.  
 po-lęčiti 504.  
 polje 271.  
 po-lučiti 504.  
 polŭ 273.  
 po-męnati 312.  
 po-mošti 333.  
 ponjava 276.  
 postelja 215.  
 po-slati 215.  
 poševi (Slov.) 166.  
 pra- 284.  
 praę 166.  
 prati 115, 164, 273, 278.  
 prđim (Bohem.) 246.  
 př- 284.  
 prijatelŭ 283.



prijati 283.	akúra (White-	svekrūvi 136.	valiti 358.
pri-tuliti 221.	Russ.) 169.	sviniļa 382.	Vary (Bohem.) 587.
pro- 284.	skvrūna 167.	svirati 354.	variti 494, 587.
proti 284.	aladiti 229.	svirelī 354.	varū 552, 587.
protiv 284.	aladūkū 229.	sviriti 354.	večerini 377.
prīeti (Bohem.) 275.	alama 139.	svo- 393.	večerū 377.
prūch- 275.	slantū 548.	svoj 393.	velij 594.
prūvyj 284.	slatina 548.		velikū 594.
pūta 210.	alava 151.		vepri 142.
pūtica 210.	alezena 288.		verēja 550.
	alina 372.		vesna 42, 388.
	alovo 151.		vetūchū 208.
rabota 292.	aluti 151, 554.		vez 192.
rabū 292.	altūnce 551.		vēdēti 101, 242.
rak (Bohem.) 143.	smēchū 329.		vējati 387.
ralo 341.	smijati 329.		vēniti 322.
ram 340.	smēgtū 318.		vēno 322.
rasti 250.	snūcha, snocha, sy-		vēra 587.
rkā 493.	nocha 319.		vēriti 587.
rek 160, 554.	sočiti 467.		vidēti 242.
rev 356.	sokū (вархъвос)		vidokū (ChSl Russ.)
rēpa 350.	467.		242.
ryč, ryč 349.	soli 548.		vika (Bohem.) 588.
rygati 182.	spēdi 523.		vikati (Serv.) 459.
ryknati 349.	spēchū 704.		vikev (Bohem.) 588.
ryal 360.	spēti 704.		viti 390.
robiti (Bohem.) 292.	spina (OBohem.)		viti 389.
robū 292.	276, 694.		vydra 248.
roditi 352.	srebro 353.		vykanije 459.
rodū 250.	srūdice 143.		vyti 388.
rostok (Bohem.)	srūptū 263.		vīdova 36.
507.	staja 212.		vīal 163.
rūdēti 252.	starū 213.		vīaga 191.
rūdrtū 252.	stati 211.		vīajati 358.
rūka 252.	stonati 213.		vīakiti 191.
	stēna 214.		vīek 136.
saditi 240.	stēni 168.		Vitava (Bohem.)
samū 322.	stignati 195.		590.
sa 392.	stīza 195.		vīukū 84, 161, 568,
abor (Bohem.) 34.	stolū 211.		726.
sebs 393.	strana 214.		vīūna (lana) 344.
sedlo 240.	strēti 215.		vīūna (unda) 358.
sedmi 265, 536.	stroiti 216.		voda 249.
sedmyj 265.	strugati 381.		voliti 549.
se 393.	struja 353.		volja 549.
sedja, sēti 240.	strūgati 381.		vonja 305.
sējati 379.	stūbro (Bohem.)		vosa 382.
sētī 394.	353.		vozū 192.
sīlo 394.	su- 392.		vragū 181.
siti 394.	suchū 393.		vranū 584.
alcati 137.	sū- 34, 392.		vrēnije 587.
synū 395.	sū-ber 299.		vrēti 550, 587.
syrū 349.	sūiati 548.		vrūba 351.
syti 398.	sūlū 548.		vrūchū 348.
syti 398, 685.	sū-mrūtū 331.		vrūza 181.
akaregovati 167.	sūnū 289.		vū 309.
akapū 704.	sūpati 289.		
aknīpa 694.	sū-pēti 272.		zabū 174.
akoblī 699.	sūto 84, 135.		zelenū 202.
akopiti 153.	svatū 251.		zelije 202, 555.
akopīc 153.	svekry 136.		zemē (Bohem.) 197.
akorec (Bohem.) 355.	svekrū 28, 136.		zemlja 197.
skotū 157.			

zēti 547.  
zējati 196.  
zijati 196.  
zingati 196.  
zlati 203.  
zlato 204.  
zluva 173.  
znamenije 178.

znati 92, 178, 442.  
zrēti 204.  
zrūno 176.  
zvērī 256.  
že 397, 526.  
žlati 198.  
žladi 474.  
žlāti 198.

želēzo 197.  
želūvi, želvi 199.  
žena 175.  
žeravi 176.  
žedati 196.  
živ 477.  
životi 477.

živti 477.  
žimpa (žeti) 547, 614.  
žlūči, žlūti 203.  
žlūtū 202.  
žrēbē 478.  
žrēbiči 478.  
žrēti 478.



- do-for-chossol 548.  
 do-for-magar 333.  
 do-fuisslim 548.  
 do-ie 308.  
 doich 135.  
 do-linim 366.  
 dolléim 462.  
 dom 327.  
 do-melat 337.  
 dometic (Cymr.) 232.  
 domm-ár-fas 297.  
 do-moiniur 312.  
 domun 513.  
 do-om-algg 184.  
 doreu (Cymr.) 258.  
 do-roi-gu 177.  
 do-rímu 340.  
 dorus 258.  
 do-saidi-siu 240.  
 do-seich 460.  
 dou (Cymr.) 239.  
 drui 239.  
 Druides (Gall.) 239.  
 druim 235.  
 du- 240.  
 duaethar 460.  
 dub 228.  
 du-ben-eticion  
 (Cymr.) 299.  
 Dubnorex (Gall.)  
 513.  
 dui (Cymr.) 239.  
 duillen 496.  
 du-imm-airthe  
 132.  
 duiutit (Cymr.) 236,  
 237.  
 dulebad 496.  
 du-m-es-uro-sa, 132.  
 Dumnorix (Gall.)  
 513.  
 duw (Cymr.) 236.  
 duwddid (Cymr.) 237.  
 duy (Cymr.) 239.  
 dwfn (Cymr.) 513.  
 dwyn (Cymr.) 255.  
 dyw (Cymr.) 236.  
 eb-rwydd (Cymr.)  
 462.  
 éc 162.  
 écad 130.  
 ech 462.  
 echaire 462.  
 echel (Cymr.) 383.  
 ehtar 383.  
 écen 309.  
 edbart 300.  
 egr (Cymr.) 131.  
 eguin (Cymr.) 322.  
 eirge 185.  
 elain (Cymr.) 360.  
 elin (Corn.) 374.  
 elit 360.  
 én 210.  
 enech 463.  
 enederen (Corn.)  
 309.  
 enef (Corn.) 305.  
 enep (Cymr., Arem.)  
 463.  
 enw (Cymr.) 321.  
 ep, eb (Cymr.) 462.  
 Eporedia (Gall.) 462.  
 er (by) Cymr. 269.  
 er (eagle) Corn. 348.  
 ér- 274.  
 er-chosmil 269, 274.  
 er-chynu (Cymr.)  
 157.  
 erdam 234.  
 er-drym (Cymr.)  
 274.  
 érigim, éirgim 185.  
 érpimm 295.  
 err 349.  
 errach 388.  
 erv (Corn.) 341.  
 erydd, eryr (Cymr.)  
 348.  
 esel (Corn.) 132.  
 espartain 377.  
 es-rechtaid 384.  
 ess (ox) 187.  
 ess (ex) 383, 384.  
 esseirge 185.  
 estar 240.  
 étach 376.  
 étan 206.  
 étar 210.  
 etar-cert, -ceirt 156.  
 etar-dibe 299.  
 etarro 394.  
 etar-scaraim 156.  
 etem (Cymr.) 211.  
 eter, etir 309.  
 etir-di-bnim 299.  
 etiuth 377.  
 etn (Cymr.) 210.  
 ewi (Cymr.) 386.  
 fadesin 394, 601.  
 faed 248.  
 fál 550.  
 fanisin 394.  
 fecht, fect 135.  
 fedb 332, 584.  
 feib 394, 601.  
 féin 601.  
 féith 390.  
 félmae 550.  
 féu 192, 193, 294.  
 feotar 289.  
 fer 601.  
 fern 567.  
 fescor 377.  
 fesin 394, 601.  
 fetar 242.  
 feth 387.  
 féthaide 390.  
 fi 389.  
 fiad 242.  
 fiam 390.  
 fich 163.  
 fiche 135, 601.  
 fil 550.  
 fili 347.  
 fillim 359.  
 fin 163, 390.  
 finemain 390.  
 finnam 242.  
 fitir 101.  
 fiur 430.  
 fo 289, 290.  
 foad 289.  
 fo-cheird, -cheirt  
 154, 156.  
 fo-daimim 232.  
 foirggae 185.  
 follus 430.  
 fo-nenaig 318.  
 for 290 (bis).  
 for-chanim 141.  
 for-cital 141.  
 for-con-gur 177.  
 for-ól 277.  
 for-ta-com-ai-som  
 386.  
 foss 207.  
 foth 737.  
 frass 345.  
 frecre 177.  
 frith, fo-frith 737.  
 frith-oreun 133.  
 fris-gair 177.  
 fróech 729.  
 fúal 350.  
 fúar 742.  
 fudomain 513.  
 fulumain 358.  
 funech 318.  
 gaem (Cymr.) 201.  
 gaimred 201.  
 gáir 177.  
 gáith 201.  
 Galba (Gall.) 479.  
 gam 201.  
 gamuin 209.  
 garan (Corn.) 176.  
 garg 737.  
 gayaf 201.  
 gein 175.  
 geiss 200.  
 gel 202, 203, 555.  
 gelid 478.  
 ad-gén 179.  
 genau (Corn.) 307.  
 Genava 308.  
 geni (Cymr.) 175.  
 genou (Cymr.) 307.  
 ghel (Corn.) 200.  
 gil 200.  
 gin, giun 307.  
 gleith 478.  
 gnáth 179.  
 gnawt (Cymr.) 179.  
 asa-gnoither 179.  
 goire 476.  
 gor 493.  
 goraim 493.  
 goriu 476.  
 gorm 494.  
 gorn 494.  
 gort 200.  
 gosper (Cymr.) 377.  
 graig 174.  
 grán 176.  
 Granno (Gall.) 494.  
 grían 494.  
 gronn 494.  
 grueiten (Corn.)  
 352.  
 guaintoin (Corn.)  
 388.  
 guaire 172.  
 guarai (Cymr.) 347.  
 gulet (Arem.) 347.  
 guerg (Cymr.) 184.  
 guin (Cymr.) 390.  
 guins (Corn.) 387.  
 guisc (Corn. Cymr.)  
 377.  
 gulan (Cymr.) 344,  
 345.  
 guor (Cymr.) 290.  
 gur 476.  
 gurth-uher (Corn.)  
 377.  
 guth 477.  
 gutte 477.  
 gwaedd (Cymr.) 248.  
 gwareu (Cymr.) 347.  
 gwden (Cymr.) 389.  
 gwedw (Cymr.) 332,  
 584.  
 gweith (Cymr.) 135.  
 gwelet (Cymr.) 347.  
 gwespar (Corn.) 377.  
 gwie (Corn.) 163.  
 gwr (Cymr.) 506.  
 gwreiddyn (Cymr.)  
 352.  
 gwrin (Cymr.) 494.  
 gwynt (Cymr.) 387.  
 haddef (Cymr.) 229.  
 hafal (Cymr.) 323.

- haidd (Cymr.) 625.  
 659.  
 halan (Cymr.) 542.  
 haliw (Cymr.) 378.  
 hanter-toetic 186.  
 hanther (Cymr.) 325.  
 hediw (Cymr.) 236.  
 heligen (Corn.) 136.  
 hen (Cymr.) 311.  
 hendat (Corn.) 225.  
 hep (Cymr.) 467.  
 heul (Cymr., Corn.) 551.  
 hewyt (Cymr.) 379.  
 hil (Cymr.) 379.  
 hoch (Corn.) 382.  
 hucc (Cymr.) 382.  
 huis (Corn.) 385.  
 hun (Cymr.) 289.  
 hveger (Corn.) 136.  
 hysp (Cymr.) 737.  
  
 iar-fact 459.  
 iarma-foich 459.  
 ibim 280.  
 ieuanc (Cymr.) 589,  
 602.  
 il 281.  
 imb- 293.  
 imbliu 294.  
 im-luad 279.  
 imm- 293.  
 imm-echtar 383.  
 imm-rera 342.  
 impu 394.  
 im-tiagam 195.  
 imthuge 186.  
 i(n) 284, 309, 310.  
 in-agid 463.  
 inathar 309.  
 in-chosig 467.  
 in-dia 134.  
 in-diu 236.  
 indiumm 234, 310.  
 ing 191.  
 inga 322.  
 ingen 175.  
 in-main 313.  
 in-nocht 163, 275.  
 in-noct 163.  
 in-ru-fill 358.  
 in-sádaim 241.  
 in-sce 467.  
 Interambes (Gall.) 310.  
 int-(s)amail 323.  
 iou (Cymr.) 182.  
 in-direc 134.  
 ire 273.  
 ir-ladigur 361.  
 ir-lithe 361.  
 irvi (Arem.) 341.  
  
 is, it 375.  
 itir-di-bither 299.  
 ithim 270.  
 iud- (Cymr.) 397.  
  
 kaer (Arem.) 138.  
 kalaf (Cymr.) 139.  
 karu (Cymr.) 147.  
 ke (Corn.) 149.  
 kerd (Corn.) 154.  
 keryd (Cymr.) 148.  
 ki, chi (Corn.) 159.  
 κόρυς (OBrit.) 147.  
 κορυμ (OBrit.) 147.  
 kuyr (Cymr.) 149.  
 kyrchu (Cymr.) 158.  
  
 laaim 551.  
 lact 173.  
 lagen (Corn.) 160.  
 lagait 192.  
 laige 194.  
 laigen 737.  
 laigiu 192, 681.  
 laith (Cymr.) 173.  
 lám (manus) 268.  
 lam (promptus) 361.  
 lán 277, 554.  
 lathach 369.  
 laun (Cymr.) 277.  
 lecc 165.  
 lécim 462.  
 legais 364.  
 leguenid (Cymr.) 363.  
 léine 366.  
 lenim 366.  
 leo 366.  
 leoman 366.  
 less 364.  
 lessugud 364.  
 lethan 278.  
 leu (Corn.) 366.  
 lewen-ki (Corn.) 366.  
 lf 271.  
 lia 165, 281.  
 lige 194.  
 ligim 194.  
 ligur 194.  
 lín (number) 277.  
 lín (flax) 366.  
 línaim 277.  
 línmaire 277.  
 litan (Cymr.) 278.  
 litimaur (Cymr.) 362.  
 liw (Cymr.) 271.  
 llaw (Cymr.) 268.  
 llawen (Cymr.) 363.  
 llew (Cymr.) 366,  
 367.  
  
 llwyn (Cymr.) 366.  
 llyncu 369.  
 loch 160.  
 lócharnn 161.  
 lóche 161.  
 lóg 363.  
 loiniu (Cymr.) 366.  
 loth 369.  
 lóthor 368, 369.  
 louazr (Arem.) 368.  
 louen (Corn.) 363.  
 louennan (Corn.) 363.  
 louuern (Corn.) 363.  
 loven (Corn.) 363.  
 ldach 363.  
 ldach-té 161.  
 ldam 279.  
 ldath 279.  
 lub-gort 200.  
 lugarn (Corn.) 161.  
 lugem 192.  
 luid 551.  
 luhet (Corn.) 161.  
 Lutetia (Gall.) 369.  
 ldud 279.  
  
 -m- 327.  
 máam 328.  
 in-made 737.  
 maided 335.  
 maidm 335.  
 ru maith 335.  
 mall 113, 230.  
 ma-ni 317.  
 máo 328.  
 már 328.  
 maraim 103, 331.  
 marb 327, 331, 332.  
 marw (Cymr.) 331.  
 máthir 333.  
 mawr (Cymr.) 328.  
 mé 327.  
 mebul 737.  
 med 260.  
 medol (Cymr.) 243.  
 medón 92, 332.  
 medw (Cymr.) 260.  
 meint (Cymr.) 328.  
 méit 328.  
 meithel 323.  
 melddach 329.  
 melen (Arem.) 370.  
 melg 184.  
 melim 337.  
 melyn (Cymr.) 370.  
 memaid 335.  
 -ménar 313.  
 menme 312.  
 menvionen (Corn.) 338.  
 merein (Arem.) 337.  
  
 mesc 249, 260.  
 mess 243, 328.  
 messa 209.  
 met 313.  
 mf- (8vt-) 209.  
 mi (ego) Cymr. 327.  
 mif (mensis) 333.  
 midar 243.  
 Mide 332.  
 midil (Corn.) 323.  
 midiur 243.  
 mil (mel) 330.  
 mfl (bestiola) 591.  
 milin (Corn.) 370.  
 milis 330.  
 mín 335.  
 mis (Cymr.) 333.  
 miscesch 594.  
 miscuis 594.  
 -mitiu 313.  
 mlicht 184.  
 mo (meus) 327.  
 mó (major) 328.  
 moch (Cymr.) 162.  
 -moiniur 313.  
 mór 328.  
 mórfesser 384, 430.  
 morion (Cymr.) 337,  
 338.  
 moy (Corn.) 328.  
 mrug 302.  
 muce 162.  
 muin (Corn.) 335.  
 muintore 469.  
 muir 332.  
 muit 336.  
 mulenn 337.  
 mw (Cymr.) 328.  
 mwyaf (Cymr.) 328.  
 mwyn (Cymr.) 335.  
 mywionyn (Cymr.) 338.  
  
 -n- 543.  
 ná 317.  
 nach 317, 487.  
 nalec 317.  
 namae 313, 314.  
 nant (Cymr.) 314.  
 nanto (Gall.) 314.  
 nathar 320.  
 nathir 168, 319.  
 nau (novem) Cymr.  
 310.  
 náu (navis) 313.  
 nech 487.  
 necht 267.  
 nedden (Cymr.) 243.  
 nei (Cymr.) 267.  
 nél 294.  
 nem 314.  
 nemed 314.



- nemeton (Gall.) 314.  
 nep 487.  
 nert 307, 375.  
 nertit 307.  
 newydd (Cymr.)  
 315, 316.  
 ney (Cymr.) 267.  
 ni (nos) 320.  
 ni, ni (non) 317.  
 nigim 317.  
 nise 267.  
 niwl (Cymr.) 294.  
 no 318.  
 noden (Corn.) 316.  
 noi(n) 310, 311.  
 noit (Corn.) 267.  
 nómad 310.  
 notuid (Cymr.) 316.  
 nu 318.  
 núe 315.  
 ny (Cymr.) 320.  
  
 ó (ab) 228.  
 ó (auris) 403.  
 óa 271.  
 óac 271, 589, 602.  
 oar (Corn.) 290.  
 oc 308.  
 oet (Cymr.) 131.  
 ochi (Cymr.) 306.  
 ochr (Cymr.) 131.  
 ochte 191.  
 ocht(n) 92, 163.  
 ochtur 383.  
 ochyr (Cymr.) 131.  
 oct 163.  
 oculus 308.  
 od 228.  
 óech 164.  
 oes (Cymr.) 385.  
 oet (Cymr.) 385,  
 386.  
 oetawc (Cymr.) 385.  
 óg (integer) 187.  
 og (ovum) 391.  
 óge 187.  
 ohan (Corn.) 187.  
 ói 92, 391.  
 oin 320.  
 oinecht 135.  
 ointu 320.  
 ois, óis 385.  
 ól 280.  
 ola-chail 149, 359.  
 olann 345, 345.  
 oleu (Cymr.) 359.  
 óm 338.  
 ore 166.  
 orcaid 133.  
 orpe 295.  
 ós 383.  
 oenad 306.  
  
 óéprpayoi (Gall.)  
 196.  
 oys (Corn.) 386.  
  
 pa (Cymr.) 486.  
 pair (Cymr.) 147.  
 paup (Cymr.) 466.  
 peber (Corn.) 465.  
 pedwar (Cymr.) 488.  
 pedwerydd (Cymr.)  
 659.  
 πεμνέδουλα (Gall.)  
 496.  
 pen-clun (Corn.) 150.  
 per (Corn.) 147.  
 permed - interedou  
 (Cymr.) 309, 310.  
 petguar (Cymr.) 27.  
 458, 488, 496.  
 pimp (Cymr.) 464.  
 poeth (Cymr.) 465.  
 pop (Cymr.) 486,  
 487.  
 popei (Corn.) 465.  
 popurys (Cymr.)  
 465.  
 pui, puy (Cymr.)  
 458, 489.  
  
 rám 342.  
 rânac 308.  
 re(n-) 284.  
 rec (Cymr.) 166.  
 rêda (Gall.) 462.  
 remi-said 240.  
 rem-auidigud 284.  
 renim 273.  
 rethe 342.  
 rhudd (Cymr.) 252.  
 rhydd (Cymr.) 659.  
 Rhydychain  
 (Cymr.) 272.  
 rí 185.  
 riad 462.  
 ríam 284.  
 ríge 185.  
 rigim 185.  
 ririú 274.  
 rit (Cymr.) 272.  
 ro 284.  
 ro chlos 151.  
 ro fessur 242.  
 ro fetar 242.  
 ro génair 175.  
 ro lá, lásat 551.  
 ro lil 366.  
 roth 343.  
 ru- 284.  
 rúad 252.  
 rwydd (Cymr.) 462.  
  
 sadb 229.  
  
 ro saidestar 241.  
 saigid 468.  
 saigim 461.  
 sail 136.  
 saile, sale 372.  
 saillim 548 (bis).  
 saith 398, 685.  
 sál (heel) 241.  
 sál (sea) 549.  
 salann 548.  
 samail 322.  
 samlaim 323.  
 (s)an- 395.  
 sathech 398.  
 scaraim 156.  
 scáth 168.  
 scian 145.  
 sciath 168.  
 scoit (Arem.) 168.  
 scuirim 156.  
 sé 384, 430.  
 sechem 460.  
 sechethar 460.  
 secht 265, 379.  
 sedait 447.  
 seddu (Cymr.) 241.  
 seith (Cymr.) 265.  
 selg 288.  
 sen 311.  
 senaich 318.  
 senchas 311.  
 seec 737.  
 sescaind 166.  
 seacen 737.  
 sessam 211.  
 sessel 384.  
 seasser 430.  
 síl 379.  
 siniu 311.  
 si-si 320.  
 siur 430.  
 slán 371, 372.  
 alemain 372.  
 alucim 369.  
 smir 714.  
 snám 319.  
 snamach 319.  
 snáthat 316.  
 snáthe 316.  
 snáus-(s)a, snó 319.  
 snechta 318.  
 sned 243.  
 sni 320.  
 snigestár, snigis  
 318.  
 snod (Corn.) 316.  
 -so 394, 395.  
 so- 36, 240, 375.  
 sochruth 240.  
 socht, sochtaim 379.  
 sochuide 460.  
 sodain 395.  
  
 sodleu (Cymr.) 241.  
 sollus 430.  
 som 322.  
 so-nirt 307.  
 sornd 494.  
 sosin (Gall.) 395.  
 Strath cluada 151.  
 sreang 381.  
 sreangaim 381.  
 sreth, srethi 354.  
 srúaim 353.  
 srub 295.  
 sruth 353.  
 ster (Arem.) 206.  
 steyr (Corn.) 206.  
 strat (Cymr.) 215,  
 216.  
 strouis (Cymr.) 215.  
 su- 36, 244, 375.  
 -su 394.  
 súan 289.  
 suide, suide (hic)  
 395.  
 suide (seat) 241.  
 súil 551.  
 sult 372.  
 suth 395.  
 su-thain 375.  
 Svadv-riz (Gall.)  
 229.  
  
 -t- 219.  
 ta-bairt 299, 300.  
 táid, táin 737.  
 taid-beiu 297.  
 taid-met 312.  
 tair-chechuin 141.  
 tairm-thecht 222.  
 tair-(s)issim 211.  
 tais-fenim, -benim  
 297.  
 táil 220.  
 tallaim 221.  
 tám 218.  
 tamon 213.  
 tan 217, 218, 375.  
 tana 217.  
 tant (Cymr.) 217.  
 tar 222.  
 tarater (Cymr.) 222.  
 tarathar 222.  
 tarb 332, 584.  
 tarm-chosal 548.  
 tarrach 225.  
 tart 224.  
 taru, tarw (Cymr.)  
 332, 584.  
 tarvos (Gall.) 584.  
 tat (Corn.) 225.  
 táu, tó 211.  
 tech 186.  
 techim 218, 507.

teg 186.	torch (Cymr.) 469.	tuicse 177.	uraid 275.
teime 545.	toris 225.	tuige, tuigim 186.	usce 249, 260.
t-éit 210.	touysogion (Cymr.) 226.	tuisel 548.	Uxellodunum
temel 545.	tra(ch) (Cymr.) 222.	tu-it 210.	(Gall.) 383.
teneu (Cymr.) 217.	tracht 381.	tulach 226.	uy (Corn.) 391.
tét 217.	traig 196.	tús 226.	
tiagalm 195.	tre 222.	tut (Cymr.) 226.	war (Corn.) 290.
tilbiu 219.	treb (Arem.) 227.	tuus 226.	Veleda 347.
tigom (Cymr.) 215.	trebou (Cymr.) 227.	twf (Cymr.) 226.	vergobretus (Gall.) 185.
tin-feth 387.	trech (Cymr.) 256.		vergotragus (Gall.) 196.
tipra 303.	tré-denus 237.	úad 228.	wyth (Cymr.) 163.
tír 224.	trén 256.	úas 383.	
tírim 224.	tressa 256.	úasal 383.	
tlawd (Cymr.) 221.	tri 222.	uoelint (Cymr.) 135.	yeh, ychen (Cymr.) 187.
to (Cymr.) 186.	trigaranus (Gall.) 176.	uch, uchel (Cymr.) 383.	yr (Cymr.) 269.
to-gairm 177.	troi, trwy (Cymr.) 222.	uch, ucheneit (Cymr.) 306.	ysgarth (Cymr.) 167.
to-gu 177.	trydydd (Cymr.) 226, 659.	ucher (Cymr.) 377.	ysglen (Cymr.) 145.
toich 135.		ud- 228.	ystarn (Cymr.) 214, 215.
toirich 225.		uille, 374, 375, 554.	
tóisech 226.		uisce 249.	
to-malt 337.		un (Cymr., Corn., Arem.) 320.	
tomus 328.			
topur 303.			
torc 469.			



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